

MONTHLY  
JOURNAL OF AGRICULTURE.

VOL. II.

SEPTEMBER, 1846.

NO. 3.

BRITISH OXEN... BY JAMES H. FENNELL.

WE cannot exactly see the applicability of the *title* to the context of this paper, as it is, in fact, a curious, valuable, and highly interesting paper on the qualities of *various races of English cattle*, together with instructive observations on their food, the management of the dairy, statistics of the London milk trade, &c. with little or nothing about *oxen in particular*! We are not sure, however, that the departure of the discourse from the text is wider than we have known it to be on some other occasions—all going to show that in what we read, as well as in what we hear, we should keep our attention alive, and form our judgment of what is said or written for ourselves, and independently, rather than from any index which may be prefixed according to the judgment or caprice of another.

If we were asked the question, What is the use of reading about Agriculture, and especially about English Agriculture? we should be willing to answer by reference even to this single paper. We could easily throw it into the form of a catechism, or series of questions, which should elicit the information and facts embodied in this article, and would then inquire of any one having a right appreciation of what becomes an enlightened agriculturist, not exactly how much money may be made by the knowledge it is fitted to impart, but whether there be, in such papers, anything idle or superfluous, or anything of which an intellectual cultivator of the soil, with a proper share of professional pride and self-esteem, should be willing to remain ignorant? For one, we do not hesitate to confess that we utterly despise and detest, and feel indignant at the thought that an American Republican freeholder, and cultivator of his own freehold, should be *merely* a successful, practical, money-making farmer!—It was not a mere phlebotomizer who discovered the circulation of the blood, nor a simple navigator that invented the chronometer! And your *mere* practical men, while they rarely do much for the progress of their art, except to illustrate, like the machine itself, the value of inventions by men who *think*, are in all professions exactly those who are apt to be made subservient to the men who scheme for themselves. Such men as BOGARDUS, the great machinist, of New-York; and WHITNEY, the inventor of the cotton-gin; and AUDUBON, the unrivaled ornithologist, are not apt to be *practical money-makers*; but who would exchange their genius and their enthusiasm, and the honor of their discoveries and writings, for any amount of sordid wealth, united with stolid ignorance?

THE particular breeds of horned cattle may be readily distinguished by certain characteristics. Thus the Ayrshire cattle, found in many parts of Scotland and England, have small size, [1] fine bone, much flesh, good symmetry, thin and

(1). The Ayrshire cattle which have been brought to this country are of what would be called not "small size," but good sized cattle, about the weight of our ordinary country cattle—not so large as the Short-Horn or Durham, but in shape the Short-Horn in miniature. [*Ed. Farm. Lib.*

loose skin, fine short silky hair, light-red color, sometimes red and white, generally a black muzzle, short and fine horns, bent upward and tipped with black; the Durham or short-horned breed possess large size, good and well-shaped bone, and much flesh, thin skin, fine short moss-like hair, red and white color, sometimes self-red, and short, fine, crumpled horns. The Devonshire cattle, now kept in almost every county in England, particularly in some parts of Yorkshire, have good size, fine bone, and short, fleshy carcass, thin skin, very silky when handled; color generally red, with a light dun muzzle and ring round the eye; horns of medium length, generally growing outward and rather inclining upward. [2.]—The Galloway cattle, found not only in that district of Scotland, but also in Norfolk, and sparingly in North Lancashire, are of large size, strong bone, well-shaped, rather thick skin, and long hair, color black and brindled, no horns. [3.] The Guernsey cattle, met with in the Channel Islands and most of the private dairy farms of England, possess small size, fine bone, very thin skin, and short, silky hair; light cream-color, with black nose; short and crumpled horns, tipped with black. The Hereford cattle have large size, small bone, good shape, thin skin, fine hair, generally red color, with white faces; horns of medium length, and rather inclining upward. [4.] The Highland cattle, great numbers of which are brought to England and fattened, are of small size, well-shaped, have thick skin, long hair; color black and brindled, sometimes dun black; horns of medium size, and bent upward. The Irish breed, of which great numbers are brought to the markets of London, Manchester, and Liverpool, are of large size, strong bone, rough shape, thick skin, long hair; color red, sometimes red and white, mixed or roaned; very long horns, bent upward. The Jersey cattle, commonly called the Alderney, are of small size, fine bone, good shape, [5] have very thin skin, fine, short hair; cream-color and dun, light dun muzzle; horns of medium length, fine, crumpled, and tipped with black. The Lancashire cattle, met with in Warwickshire, Leicestershire, and the northern parts of Lancashire, are of large size, strong bone, roughly made, thick skin, long and rough hair; color various, but more commonly red and white; the horns long and thick, and com-

(2). Let those who are buying Devons be careful to choose them with a rich yellow color around the eyes and muzzle, and as little *white* about the udder and the tip of the tail as they can get. Let not white any where else be tolerated. It is but the breaking out of an old sore, a stain in the blood.

[Ed. Farm. Lib.]

(3). This is the breed of cattle which we have thought ought to be imported for the cattle-breeder in our south and south-western mountains, where they run out and have to "rough it," as it is called. They are the *Canada horse* of cattle. The late General FORMAN used to maintain that the injury and death sometimes inflicted upon horses and other animals, ought alone to induce farmers to give preference, as he did, to *hornless* cattle.

[Ed. Farm. Lib.]

(4). This race of cattle is here well described. They appear to be "on the rise" in popularity in this country, and holding in England a hard race with the best. Mr. CORNING, near Albany, owns in considerable numbers the only herd we know of, and that in great perfection. They deserve more extensive notice and trial than they have had in this country.

[Ed. Farm. Lib.]

(5). We cannot agree in their being generally of "good shape." We have seen a large proportion of all that have been brought to this country, and have owned a few of the best. The best we ever saw was sold to Commodore CHAUNCEY, many years since, and brought to New-York; and we would wager a trifle that we saw a few weeks since a descendant of hers on Long Island. Generally, those we have seen had ugly "ewe-necks" and ragged hips; being, in many cases, what is denominated "goose-rumped." If, however, the drop from the hip to the root of the tail resembles the rump of a goose, it must be that of the gander, on particular occasions. But the milk of the true Alderney is invariably and exceedingly rich, throwing up a delicious yellow cream, suited to perfect a cup of old Mocha, and giving butter of the finest color. Mr. COLT, at Paterson, has superior specimens of the Alderney, and his son, Mr. JOHN COLT, a very superior prize bull of the Ayrshire breed, imported from Scotland.

One thing which causes improved cattle and sheep to be neglected and undervalued, especially when they fall into the hands of the liberal and the opulent, is, that instead of charging a high price for their services or progeny, they are apt to give them away. What thus comes light is not so apt to be properly valued. To this, of course, there are striking exceptions.

[Ed. Farm. Lib.]

monly slouching. [6.] The Sussex cattle, found in that county and in Kent, are of good size, strong bone, well-shaped, thin skin, fine hair; color red, with white faces; horns of medium length, and bent upward. The Suffolk duns, met with in that county and in Norfolk, are of medium size, stiffly made; have the skin of medium thickness, and shaggy hair; color generally lightish dun; no horns. The Welsh cattle, now going out of use very fast in England, are of medium size, roughly made, have a thick skin, long shaggy hair, black color, sometimes black and white; horns thick and long, in some of medium length.

Our various breeds of cattle are generally of hardy constitution. The Guernsey and Jersey cattle, though of very good constitution in their native islands, are delicate when brought to England, requiring shelter and careful attention.

All the species and breeds of oxen have only thirteen pairs of ribs, being a less number than in either the American or European bison. Certain bones, found in the heart of all ruminating animals, except the horse and the stag, have been mentioned by some writers on comparative anatomy as accidental ossifications, found only in the adult animal, particularly in the male. This, however, is erroneous; for these bones are constant, and are found in the calf as invariably as in the adult, in both male and female. Professor Harrison thinks that the principal purpose of these bones is to protect the aorta from being endangered by the enormous muscularity of the left ventricle in these animals, to serve as a fixed point of action to muscular fibres, to prevent total closure of the ventricles, and to preserve the large sinuses from the powerful resilience of the aorta, to which object the very remarkable hard mass of fat found at the base of the heart in these animals is also assistant.

Oxen are greatly excited at scarlet, probably because, in a state of nature, they do not frequently meet with this color; which is, therefore, strange to them; offering, too, a strong contrast with the surrounding cool tones. "A bull," says Barnaby Goodge, "will wax furious at the sight of any red thing; and the elephant and the lion cannot in nowise abide the sight of any white thing."\* Mr. R. D. Hay, in an interesting work upon colors, remarks that though red-yellow excites an agreeable, cheerful sensation, bright yellow-red conveys an intolerably powerful impression, the active side being here in its highest energy.

"It is, therefore, no wonder that impetuous, robust, uneducated men should be especially pleased with this color. Among savage nations the inclination for it has been universally remarked; and when children, left to themselves, begin to use tints, they never spare vermilion and minium. In looking steadfastly at a perfectly yellow-red surface, the color seems actually to penetrate the organ. It produces an extreme excitement, and still acts thus when somewhat darkened. A yellow-red cloth disturbs and enrages animals. I have known men of education to whom its effect was intolerable, if they chanced to see a person dressed in a scarlet cloak on a gray, cloudy day."

In all domestic animals, the skin or hide forms one of the best means by which we can estimate their fattening properties. In the handling of oxen, if the hide be found soft and silky to the touch, it affords a proof of a tendency in the animal

(6). These are nearly identical, probably, with the famous *Bakewell*, or *Leicester*, or *Dishley* cattle, sometimes called Long-Horn—very straight on the back, tail setting high up on a line with the spine, back generally white, with long, ugly, hanging-down horns. They have gone out of fashion in England, chiefly on account of their laying their fat all on the *outside*, like a coat of plaster on a brick wall. Bakewell deserves great credit for the leading part he took in demonstrating the practicability of effecting great and substantial improvement in the qualities of cattle, by a careful and judicious selection of such as, with the fewest defects, possessed in the highest degree the points and properties which were most desirable, and would make up an animal to yield the most profit in the shortest time. But while others took the hint and pushed the science far beyond anything he attained, he in some measure blarneyed his own character as a farmer by a sinister or churlish concealment or mystery, if not disingenuousness. He thought it allowable, it would seem, to learn all he could, and to lock up from his neighbors and friends what he did learn, in his own breast. This may do in other arts and trades, but is utterly incompatible with all liberal notions of the character and duties of an *agriculturist*! It is the boast of the industrious and fair-minded farmer, that as he works in the open day, so he wishes not to hide his lights under a bushel when they may be useful to his neighbors.

[Ed. Farm. Lib.]

\* Booke of Husbandry, 1586, p. 127, b.  
(243)



to take meat. A beast having a perfect touch will have a thick, loose skin—floating, as it were, on a layer of soft fat, yielding to the slightest pressure, and springing back toward the finger like a piece of soft, thick chamois leather.—Such a skin will be usually covered with an abundance of glossy hair, feeling like a bed of moss, and hence is very appropriately termed a mossy skin. But a thick, firm skin, which is generally covered by thick-set, hard, short hair, always handles hard, and indicates a bad feeder.

The size to which cattle may be fattened is truly astonishing. Evelyn mentions the exhibition in London of an ox that was 17 feet from the end of the tail to the nose. At Bartholomew Fair, in 1703, a great Lincolnshire ox was exhibited, measuring 12 feet from the rump to the face, and standing 19 hands high. The Bradwell ox, five years old, weighed 4,320 pounds; but it was so fat that it moved with difficulty. Mr. T. Bond, of the Lower Marsh, Lambeth, killed an ox whose total weight was 294 stone 3 pounds, with 40 stone 4 pounds of loose fat.\* As a general mode of fattening oxen, it has been recommended to give them daily 2 lbs. of oil-cake, 5 lbs. of barley-meal, and 5 lbs. of hay-chaff, with a plentiful allowance of Swedes. By a composition for fattening cattle, manufactured by Mr. Warnes, of Walsingham, Norfolk, it is said that beef may be grown more cheaply than by any of the ordinary methods of feeding. Everybody knows that horses frequently pass some of their corn quite undigested; but this circumstance rarely happens with horned cattle; for, as they chew the cud, they can digest their food more effectually than those which do not—hence it is well known to graziers that one-third less will be enough for an ox than for a horse or an ass. According, however, to the experiments of De Dombassle and Biot, this depends, at least in the case of roots, such as carrots and potatoes, upon boiling, so as to break the globular crust enveloping the nutrient matter,† which the stomach cannot well effect.

Cattle are fond of the tender tops of furze, and in Shetland they show a liking for the drift sea-weed on the beach. Linnæus says that cows are fond of the leaves of the bird cherry. Culpepper states that the leaves of the black alder “are good fodder for kine, to make them give more milk.” Oxen will sometimes browse also on the leaves of the privet.

A few acres of land cultivated with burnet, lucerne, cabbage, turnips, and carrots, will supply the cow-keeper with a constant succession of green fodder for his cattle, and save him the expense of purchasing so much hay, frequently at a high price, and greatly improve the flavor and increase the quantity of the milk. For the latter purpose, carrots are excellent in winter and early in the spring, but the butter made of the cream is generally a little higher colored, being a deep yellow, though not worse in quality than that which is made when the cows feed in the summer months on sweet meadow grass. Some farmers give their cows malt-dust, especially in the winter—not the malt-kiln dust, which should be reserved for a top-dressing for corn, but the germ of the barley, which sprouts out while it is making into malt. After the malt has been dried on the kiln, and passed over a wire-screen, it falls through and separates from the malt. This malt-dust is of a very warm, dry, nourishing quality—causes the cows to drink freely, and yield a large quantity of excellent milk. The London milk would, probably, have a less watery flavor, if the bad quality of grains, given so largely to the cows, were corrected by the constant addition of some malt-dust, which is found to improve the quality and flavor, and to augment the quantity of the milk. Each cow might have half a peck of it at her breakfast, and as much at the time of milking in the afternoon. From M. Boussingault's experiments on the feeding of cows with beet-root and potatoes, we learn that when either of these vegetables is given, to the exclusion of all other food, it does not fatten cattle nor increase the quantity of their milk. Two cows, which were fed exclusively on beet-root, fell off in 17 days nearly one-sixth, and their milk diminished from 8 to 9 litres per day to 5 litres; but, when they were turned into pasture, they soon resumed their former weight, and yielded their former quantity of milk. They were next fed exclusively on potatoes, when they fell off still more in flesh than they did on beet-root, and the milk was reduced to two litres each per day; but,

\* The Smithfield stone of 8 lbs. we presume is what is here referred to.

[Editor.

† This matter, formerly named *amadine*, from its occurring in starch, M. Biot has termed *deztrine*, from its singular property of polarizing the rays of light toward the right.



on being placed on a mixed food of hay, chopped straw, beet-root, and potatoes, they regained their flesh, and yielded the same quantity of milk as at first.

It is a vulgar notion that the butter-cup, or crow-foot, abounding in meadows, is the cause of the butter having sometimes a bright yellow color. Stillingfleet, in his *Observations on Grasses*, says he believes this to be a mistake; for he never could observe that any part of the plant was touched by cows or any other cattle. The proof that cows do not eat this acrid plant is strikingly visible in pastures, where, though all the grass is cropped to the very roots, numerous buttercups spring up, flower, and shed their seeds in perfect security. They are indeed cut down, and made into hay, together with the rest of the weeds that usually infest every meadow, and in this state are eaten by the cattle, partly because they are incapable of separating them, and partly because, by drying, their acrimony is considerably subdued; but there can be no doubt of their place being much better supplied by any sort of real grass; for the excellence of a meadow consists in its producing as large a crop as possible of agreeable and nutritious herbage. Every butter-cup ought, therefore, to be extirpated, if practicable, along with the hemlock, kex, and other umbelliferous plants which are common in most fields. Linnæus, in his *Flora Lapponica*, p. 195, says that it was thought by some people that the marsh marigold made the butter yellow, but he denies that the cows ever touch that plant; yet he thinks that all kinds of pasture will not give that yellowness; then he observes that the best and yellowest butter that he knows, and which is preferred by the dealers in those parts to all other butter, was made where the cow-wheat grew in greater plenty than he ever saw it anywhere else. Mr. Edwin Lees mentions an instance of seven cows having been poisoned by feeding upon the common meadow-saffron (*Colchicum autumnale*) in a field at Llanvihangel Pentre, South Wales, where it grew in great profusion. The farmer turned them into the meadow in the early spring, after a winter's feeding on hay, and, being impatient for green food, they devoured this plant, and were all found dead next morning.\* A valuable cow belonging to Mr. William Morrow, of Drummerrin, near Armagh, died from being overfed with frosted turnips, and, after being turned out, drinking copiously of cold water.—Practical farmers and veterinarians assert that the essential oil of turpentine, in doses of two fluid ounces, or a common wine-glass full, administered in any mild fluid, acts as a specific in all such cases.

From the late Earl Spencer's observations on the period of gestation of seven hundred and sixty-four cows, it appears that it extends to two hundred and eighty-four days, not two hundred and seventy days, as formerly stated. As all high-bred animals have a *natural tendency to degenerate*, if not kept up by due intermixture of blood, it is very desirable to know in what manner the breed may not only be kept up to its standard, but also improved. Hitherto there has not been a sufficiently extended and carefully conducted series of experiments upon this subject; and, consequently, there are no positive data on record enabling us to determine, by comparative proximity with the legitimate zoological standard of the species, the probability of permanence in any particular breed. [7.]

In improving the form of cattle, it is necessary to select a well-formed cow, proportionally larger than the bull. Mr. Cline, speaking upon anatomical principles, says that the base of the cone which forms the chest of a cow should be capacious, to afford the lungs sufficient room, and thereby promote the digestive powers of the animal, (though the Devonshire cattle are often deficient in their chest;) the hips and the twist should be broad, that the cavity for the fœtus may be sufficiently large; the breadth of the loins is always in proportion to that of the chest and the pelvis; the head should be small, and the length of the neck should be proportioned to the height of the animal, that it may collect its food with ease; the muscles and tendons should be large, to enable it to travel with

(7). These are views and opinions we have long maintained on this subject, and have hence expressed the apprehension that for want of experience and continued attention, imported cattle of improved, and more especially of made-up artificial races, would be apt to degenerate in this country.

[Ed. Farm. Lib.]

\* The Naturalist, vol. i. p. 215.

greater facility; [8] the bones, however, should not be coarse and large; a short-legged cow is preferable; the hair should be neither staring nor hard. A Gloucestershire rhyme describes a beautiful cow as being

"Long in her sides, bright in her eyes,  
Short in her legs, thin in her thighs,  
Big in her ribs, wide in her pins,  
Full in her bosom, small in her shins,  
Long in her face, fine in her tail,  
And never deficient in filling her pail.

There is no month in the year equal to March for the production of calves, if we take the whole country into our calculation. As cows will propagate their species at any period of the year, it consequently depends in most cases upon the views of the farmer or grazier regarding the ultimate profits arising from cattle that we everywhere find some cows producing calves at one season of the year and some at another. Spring, however, is the principal season with breeders of stock in general, since calves produced early in spring commonly make out better, and are more profitable upon the whole (except such as are intended for the butcher) than those produced at any other season; whereas cows that calve several months before there is a supply of grass, scarcely ever yield so much milk during the succeeding summer as if the case had been otherwise; and hence the profits are lessened, to whatever purpose the milk may be converted. However, in large and populous towns and communities there is a constant demand for milk (and butter too) throughout the whole year, so that those persons who keep dairies, and supply their customers during the entire summer, are under the necessity of meeting the demand during the winter also; and hence some of their cows are always in full milk, that is, newly calved. Much, however, is now effected by the use of turnips, mangel-wurzel, cabbages, carrots, and other succulent vegetables, in the way of causing cows to supply plenty of milk during the winter; but as it is a well ascertained fact that these vegetables cannot be cultivated but at a greater cost to the farmer than summer grass, this system is but little resorted to, except in situations where it always commands a remunerating price to the dairyman. In the principal districts where cheese is made in large quantities—as, for instance, Cheshire, Derbyshire, Gloucestershire, Dorsetshire, &c.—the dairy farmers invariably contrive to have their cows calving sufficiently early in the season to enable them to commence cheese-making at the period there is enough of grass for the cows being turned out to pasture; and this process of cheese-making is regularly continued into the autumn; and in the early part of the winter the cows are no longer milked, as there exists a somewhat general opinion that cows that are allowed to go dry for three or four months before calving are apt to yield a greater quantity of milk during the next season. Besides, there is a saving in the expense of maintaining dry cows; for it is the general custom in the dairying districts to feed these cows upon straw and a small quantity of hay, or else a few turnips, after they no longer yield milk, until within a short period of their calving.

Dr. Lyon Playfair, having selected a cow in good milking condition and at the time fed upon after-grass, ascertained the average amount of her milk for five days, and then proceeded to analyze it. In the first day it was observed that the milk of the evening contained 3·7 per cent. of butter, and of the following morning 5·6 per cent. The deficiency in the first observation is referred to the consumption of a greater portion of the butter or its constituents, from respiratory oxidation during the day, when the animal was in the field, than during the night, when it was at rest in the stall. When confined during the day, and fed with after-grass in a shed, the proportion of the butter rose to 5·1 per cent.;

(8). Greater attention to this traveling capacity in cattle and hogs was needed formerly than now; though it is yet necessary. Cheapness of transportation by steam, and improvement in the art of curing provisions to suit our own and the foreign market, will cause a much larger proportion of beef and pork to be slaughtered on the spot where it is fattened, than has heretofore happened. One of the best known and most extensive graziers in Kentucky, General T. SHELBY, went this summer to England expressly for the purpose of looking thoroughly into this subject, and promised to favor us, for THE FARMERS' LIBRARY, with the result of his observations.

when fed with hay, the butter was 3.9 and 4.6 per cent.; when fed with portions of potatoes, hay, and bean flour, the butter was 6.7 and 4.9 per cent.; with hay and potatoes, 4.6 and 4.9 per cent. These facts, together with Bous-singault's experiments, and the observations of dairymen in different localities, are opposed to Dumas's theory, that the butter in milk arises solely from the fat contained in the food; for it may reasonably be referred to the starch and other unazotized elements of the food, as maintained by Liebig. Potatoes are particularly favorable to the flow of milk and increase of butter, from the starch they contain; so is malt refuse. Porter and beer are also well known to be favorable to the production of butter, both in the milk of woman and of the cow, although these fluids do not contain fat.\* The quantity of caseine (cheese) in the milk was found by Doctor Playfair to depend on the quantity of albumen in the food supplied on different days to the cow, and to the supposed destruction of the tissues by muscular exercise. Peas and beans are the food which yields most caseine. Pasturing in the open field is more favorable to the formation of caseine, while stall-feeding is more favorable to the formation of butter. The proportion of butter in the milk of woman is increased by rest and the diminution of the respiratory oxidation.

In the neighborhood of towns and villages, where milk and other products of the cow are in demand for the market, a good food for rearing the young cattle may be supplied by dissolving pearl sago in boiling water. Eight quarts of this solution of pearl sago will cost only half the price of the same quantity of milk, and will prove even more nutritious than the latter. Oil-cake is an excellent food, along with turnips, to fatten calves, and the manure the cattle drop while upon this diet is very serviceable to the crops. An Ayrshire farmer, who uses annually about £120 worth of oil-cake for his cattle, assures us that disease scarcely ever occurs among his stock, although formerly he used to lose many of them, especially calves, which were frequently carried off by that fatal and malignant malady commonly called *black leg*, but which has entirely disappeared since he has commenced the use of oil-cake. Turnips, with a liberal allowance of oil-cake, are found conducive to early maturity. After a long course of experience, this grazer is of opinion that cows should calve during February; for when born later than this month, the calves are, while in the farmer's possession, an eyesore, from their being so far behind their compeers in growth; but if calved earlier than February, the cows are apt to fail in their secretion of milk before the grass can afford them a good bite.

Mr. M'Bryde is of opinion that, to obtain the greatest amount of beef in the shortest time, the cattle should be tied up by the necks in stalls, and fed for six or eight weeks upon turnips, with oil-cake, bruised oats, beans, &c. Mr. M'Culloch, factor at Logan, whose opinion is of great weight, thinks that ordinary sized cattle would feed fully as well tied up in properly ventilated houses; but that large cattle would do better in hammels, where they had a small space to move about, and which prevented their feet giving way. He observes that the cattle in the hammels consume more food than those stall-fed; but whether this extra food is expended in the production of motion or of fat he has not ascertained. From his experience he prefers cutting turnips into slices of from one and a half to two inches thick; and while this thickness prevents some little waste of the turnips from being too much reduced, it, at the same time, allows the cattle to masticate with ease, and to fill their stomachs with less trouble, and consequently there is less expenditure of the body. The system adopted at Logan Mains, in giving oil-cake to cattle, is to grow and to preserve the seed, which is bruised and boiled along with equal proportions of bruised oats and bear, and of this mixture, from four to six pounds per day are given hot, after the cattle have been tied up about two months. The expense of this diet is amply repaid, and the manure is very much enriched. When oats are at a low price, a few pounds of them per day may be advantageously added to the turnips. If lump potatoes can be had for not more than seven or eight shillings per boll, it might be profitable to feed cattle upon them.

\* On the farm of Mr. Castle of Northbourne, in Kent, a cow, having got access to some fresh brewed strong ale left out to cool, drank so plentifully of it that she was shortly taken ill, and died in a few hours in a state of intoxication, although proper remedies were administered by a farrier who was called in.



Some French philosophers have found that, from the same food, a cow yields in milk twice as much food available to man as a feeding ox will yield in flesh and fat. M. Donné states that there is a striking analogy between milk and blood, and says that he has injected milk into the veins of many animals without causing any injury. From lean cattle, poorly kept, milk is never known to be good. London milk is generally deficient in thick, rich cream. The Durham cows yield a large quantity of milk, and numbers of them are, therefore, kept in London dairies and in the dairy-farms about Manchester. Milk of a rich quality, fit to supply good cream and butter, is generally yielded in small quantity, as in the case of the Galloway, Guernsey, Hereford, Highland, and Jersey cows. The cows used for the London milk market are mostly of a large size, with short horns, and are distinguished by the name of Holderness cattle—from a district so called in the East Riding of Yorkshire. (9). It appears that the entire number of cows kept by the London cow-keepers amounts to 8,500—namely, 7,200 in Middlesex, 681 in Kent, and 619 in Surrey. Each cow, on the average, yields nine quarts per diem, or 3,285 quarts per annum; but deducting 285 quarts for suckling, casualties, &c. gives us a total of 6,375,000 gallons of pure milk to supply the consumption of London and its vicinity. But as the retail venders adulterate it with at least 120 per cent. of water, the total annual consumption of *what is called milk* amounts to 15,937,500 gallons. Each Londoner, on the average, consumes annually ten gallons, three quarts, and nearly two pints of milk. The price at which milk is sold to the retail venders varies from 1s. 8d. to 1s. 10d. for eight quarts; which, taking it at the medium of 1s. 9d. gives a total of £278,906 5s. for the wholesale price, and an annual expenditure, after the assistance of the pump, of £697,265 12s. 6d. According to the occupation abstract of the census of 1841, the number of persons employed in feeding cows and selling milk in London was 2,764. While the milking of cows is going on, the pans should be placed in boiling water. If the milk be strained into one of the hot pans, and covered with another hot pan, proceeding in like manner with the whole mess of milk, you will find that you will have double the quantity of good rich cream, and double the quantity of sweet and delicious butter. It has lately become very common, especially in large dairies, to keep milk in zinc bowls, which have been recommended for promoting the formation of a larger quantity of cream, owing to galvanic action; but the use of them has been attended with poisonous effects.

"I could scarcely have believed," says Dr. Elaines of Berlin, "that zinc vessels could again have come into use for holding fluids used for alimentary purposes, as Vauquelin, forty years ago, proved that such were certain, after a short time, (when the milk has become sour and the pans themselves sour,) to hold a considerable portion of zinc (and salts of zinc) in solution. I have found by experience that a solution of sugar, which had stood only a few hours, in summer, in a zinc vessel, contained a considerable amount of zinc salts. Cream will separate more easily from milk kept for a short time in a zinc vessel; but as the milk will turn acid much sooner than a solution of sugar, it is the more to be apprehended that some zinc will be dissolved, and such milk will be the more noxious, as it is well known that even a small amount of zinc will cause violent spasmodic vomitings."

The coagulation of milk under the influence of a simple wet membrane is a remarkable phenomenon not easily explained. Berzelius tried a very curious experiment with a view of ascertaining the effect on the membrane itself. He took a bit of the lining of a calf's stomach, washed it clean, dried it as completely as possible, weighed it carefully, put it into eighteen hundred times its weight of milk, and heated the whole to 120 degrees Fahrenheit. After some little time, coagulation was complete. He then removed the membrane, washed, dried, and weighed it again; the loss amounted to rather more than one-seventeenth of the whole. According to this experiment, one part of the active matter dissolved from the membrane had coagulated about thirty thousand of milk.

The experiments of Professor Traill show that the addition of some cold wa-

(9). This breed is distinguished by its large frame of coarse bone, and is said to have formed the chief basis of the Durham or "*improved Short-Horn*." They were formerly, in Maryland, called the "*Gough breed*" of cattle, from their having been imported by Mr. Gough, of Baltimore. Mr. Semmes, of Delaware, had a herd of them, and we have seen many possessing all the characteristics of the breed at "*Blakeford*," a beautiful estate of the late patriotic Governor WRIGHT, which has returned to the family, and been highly improved in the possession of his son, W. H. D. C. WRIGHT, Esq.

[Ed. Farm. Lib.

ter facilitates the process of butter-making, especially when the cream is thick and the weather hot; that cream alone is more easily churned than a mixture of cream and milk; that butter produced from sweet cream has the finest flavor when fresh, and appears to keep longest without acquiring rancidity; but the buttermilk so obtained is poor and small in quantity; that the scalding of the cream, according to the Devonshire method, yields the largest quantity of butter, which, if intended for immediate use, is agreeable to the palate and readily salable; but, if intended to be salted, is most liable to acquire, by keeping, a rancid flavor. The process of scalding is troublesome, and the milk, after the removal of the cream, is poor, and often would be unsalable, from the taste it has acquired from the heating. It also appears that churning the milk and cream together, after they have become slightly acid, seems to be the most economical process on the whole; because it yields a large quantity of excellent butter, and the buttermilk is of good quality; and that the keeping of butter in a sound state depends on its being obtained as free from uncombined albumen or caseine and water as it can be, by means of washing and working the butter when taken from the churn.

By a newly invented block-tin milk-churn, now in use at Lisburn and other parts of Ireland, butter can be made in ten minutes at all seasons of the year. In salting or curing butter, it is preferable to use vessels made from timber which has been previously boiled four hours, to free it from the pyroligneous acid; or else made of the lime tree, the wood of which does not contain this acid. Butter will keep without salt if melted over a slow fire to expel all its watery particles. To remove the bad smell and disagreeable taste of rancid butter, and restore its sweetness, it is only necessary to beat it in a sufficient quantity of water, into which put fifteen drops of chloride of lime for every pound of butter. After having mixed it till all its parts are in contact with the water, it may be left in for an hour or two—afterward withdrawn and washed anew in fresh water. The chloride of lime has nothing injurious in it, and, therefore, the number of drops may be increased if thought proper.

The hoofs and horns of a hundred head of cattle are daily consumed in Campsie Alum Works in the manufacture of that beautiful yellow salt, prussiate of potash, which Mr. Macintosh introduced among the calico-printers, who use it extensively to produce very showy blues and greens. It is prepared by burning the hoofs and horns in iron pots, along with potash and a requisite quantity of iron. The residue, after this combustion, is lixiviated with water, and when the solution is sufficiently concentrated, the prussiate of potash crystallizes.

It would be well if some good cook, acquainted with a little chemistry, would make some experiments upon the cookery of bone, which might be made to yield many soups and other palatable and nutritious dishes. Professor Brande observes that—

“Bone constitutes, upon an average, a fifth part of the weight of an animal, and one-third of the weight of bone may be reckoned as good substantial food. The weight of butchers' meat consumed in London annually is supposed to be 172,000,000 lbs. including 35,000,000 lbs. of bone, which would, yield 11,000,000 lbs. of dry gelatine, or real nutritive matter, which, at present, is so far wasted as not to be applied to the direct support of human life. The bones of pork, game, poultry, and fish, not included in this statement, must also be of great amount. From all or any of these an excellent dry gelatine, or portable soup, might be prepared and sold for about 2s. per lb., equivalent to three or four times its weight of raw meat.”

Ground bones are employed as a manure for dry soils with the very best effect. Mr. Huskisson, who estimated the real value of bones annually imported (principally from the Netherlands and Germany) for the purpose of being used as a manure, at £100,000, contended that it was not too much to suppose that an advance of between £100,000 and £200,000 expended on this manure, occasioned 500,000 additional quarters of corn to be brought to market. When bones are intended for manure, they may be dissolved by pouring some sulphuric acid over the bone-heaps, keeping them turned until they are thoroughly in contact with the liquid.

[Journal of the Transactions of the Highland and Agri. Soc. of Scotland.]

THE POTATO ROT has made its appearance in the great Miami Valley. One field of eighteen acres, it is represented, is so badly injured that the owner has turned his hogs upon it. The crop this season in the west generally is said to be a very abundant one, and generally of excellent quality, and we hope that it is not seriously to be injured by disease.

## EGGS.

## HOW TO PRESERVE—THE EGG TRADE OF CINCINNATI.

For preserving eggs the following directions are given in the Boston Cultivator in a way to inspire the fullest confidence :

"We have seen many recipes for preserving eggs, and have tried several without success. They have been saved in good condition, a year or more, in lime-water ; but this requires much skill, as the lime-water may be too weak or too strong, there being a vast difference in the quality of lime. These nice chemical preparations may answer for those who are doing business on a large scale, but for common domestic purposes they will not answer. We put down some eggs in plaster of Paris last July, (1844,) in a close vessel. First, a layer of plaster, then a layer of eggs, not allowing one egg to touch another. On top we put a few inches of plaster, then covered the vessel over closely. The eggs were fresh, being put down as fast as they were laid, or within three or four days. They were placed with the small end downward, and placed in a dry cellar. In another vessel we put down some at the same time, and in the same manner, with fine salt. Eggs from both lots have been tried every month from January ; the last trial was on the first of this month, (June, 1845,) when the eggs had been put down nearly eleven months. They have all proved to be perfectly sweet and pure ; and at the last trial, the white, in a raw state, had its natural taste, and those saved in salt had no perceptible taste of salt. The eggs looked, when broken, like recently laid eggs, excepting for the last three months. In those saved in salt the yolk adhered to the shell ; on this account, and as salt is liable to melt in a cellar, we prefer the plaster."

There is a patented establishment in Baltimore, and one has lately been erected in Brooklyn, N. Y. in which not only eggs, but strawberries, raspberries, peaches, pine-apples, oranges, and fruit of every sort, may be preserved throughout the year.

The egg trade of Cincinnati alone amounts annually to 10,000 barrels, containing 963,000 dozen, valued at \$90,361 50, besides 1,233,333 dozen, valued at 8 cents a dozen, runs up the total value of this apparent trifle, in the business of a single city, to \$97,066 64. There are six *egg houses* in that town, one of which shipped 4,624,400 eggs.

## THE ATMOSPHERIC CHURN—A FAILURE

In a recent number of THE FARMERS' LIBRARY AND JOURNAL, I have seen an account of an *Atmospheric Churn*, whereby the butter was churned by transmitting through the cream a current of air. I have tried this with small quantities of cream, at the most favorable temperature, and have never obtained butter in less than *two hours*, when twenty minutes were sufficient by the ordinary process. Having given it a fair trial, I am sorry to conclude that the plan, which appeared so plausible, is *not* practicable.

Yours, respectfully, N. B. WEBSTER.

Portsmouth, Va.

P. S. I hope to send you several subscribers to THE LIBRARY AND JOURNAL.\*

\* We are receiving similar encouragement every day, from gentlemen of influence and abilities in all parts of the country. We can only say, most thankfully, that we shall labor without stint to deserve it ; and would do so, if we possessed Astor's estate, were it only for the good cause.



## NEW STAPLES RECOMMENDED.

## THE CULTURE OF THE VINE IN THE UNITED STATES.

THE average crop of wheat in England, one year with another, has been estimated at eighteen millions of quarters, or one hundred and forty-four millions of bushels. The whole crop of grain in the United States was estimated by the census of 1840 at—

Wheat .....	84,823,272 bushels.
Barley .....	4,161,504 "
Oats .....	123,071,341 "
Rye .....	7,291,734 "
Indian Corn .....	377,531,875 "

Making a total of grain.....596,879,726 bushels.

But there is nothing more remarkable in the husbandry of any country than the liability of the wheat crop in England to be seriously affected and diminished, to a degree sometimes amounting to a national calamity, by the occurrence of *only a few days of unfavorable weather*; thus making the supply of the staff of life either very abundant or very scarce, according to the uncertain and uncontrollable vicissitudes of the seasons. It happened thus that while the wheat crop in 1844 was estimated at one hundred and ninety-two millions of bushels, that of the next year, 1845, was only one hundred and twenty millions, making a difference in that comparatively small country, of seventy-two millions of bushels; the former year yielding forty-eight millions of bushels *above*, and the second twenty-four millions *below* an average crop!

The vast extent of our country, however, having several single States larger than England, exempts us from these extreme fluctuations; because the deficiencies of one State may be supplied by the redundancy of another. The baleful influences that may prevail over a small territory like that of England are not likely to spread over a vastly greater geographical extent, the organized portions of the United States being more than twenty times the size of England; and besides, the greater diversity of our great staple-crops renders less precarious the hopes and condition of our agriculturists, and yet more the condition of those who have to buy bread; for, in addition to all, or nearly all, the great staple crops of England, we have our crops of cotton, and sugar, and tobacco, rice and Indian corn; and it is well worthy of inquiry, considering how low the prices of provisions are likely to continue, what stands in the way of *extending our crops of oil, of flax, hemp, silk, madder, and the grape and grape wine?*

Were we to pay respect to the signs which Nature herself has hung out on every highway and by-way throughout the country, we could not fail to recognize in them so many proclamations of our ability not only to produce abundance of *wine*, but *silk* also, both of which we still get from France to the tune of so many millions of dollars annually. Unfortunately, however, instead of being a nation of wine-drinkers, and thereafter a sober people, as all wine-drinking people are, we have learned from our ancestors to substitute for the grape and the refined and refining juices thereof, still-burnt, inebriating whisky and stupefying malt liquors. Walk or ride, in almost any direction over a great part of our country, and there you meet the *mulberry* and the *vine*, flourishing in spontane-

ous luxuriance, seeming obviously to suggest, at every turn, the rearing of the silk-worm and the culture of the grape as among the most palatable and healthy of all fruits, and the manufacture of wine as a beverage that everywhere implies and is accompanied by national sobriety and industry.

We were never more struck with this than in a late ride in Prince George's county, down as low as Nottingham. Through all that county, (and no less in our mountainous regions less adapted to the plow,) as in fact through all southern grain States, there is a wide margin or turning-row left along every fence side, enough on every plantation to make a snug New-England farm. These immense turning-rows and fence sides soon grow up in briars, and almost everywhere exhibit *luxuriant volunteer grape vines*—going unequivocally to indicate the congeniality of the soil and climate to the production of the grape and the wines for which the grape has been used from the days of Noah to the present time. Notwithstanding this clear intimation of a kind Providence inviting to the cultivation and improvement of this delicious and wholesome fruit, and, as it were, flaunting in our very face and eyes the proof of our facilities for producing it, how many farmers there are still, who let season after season pass without having a single well-cultivated vine about their premises! for even one would supply their table with grapes enough for one family. Fortunately this classical and interesting branch of industry appears to be taking firm root in some of the younger States, to whom we on the sea-board should have set the example. In Ohio and Indiana, where it seems to be making most steady progress, settlers from the Rhine have probably contributed to push it forward by their practical knowledge of the subject, counteracting in this way the pernicious influence and bad habits of too many others who bring with them the love of liquor and all its riotous and disorderly propensities.

We submit an essay on the *Culture of the Grape* (taken from the *Cincinnati Farmer and Gardener*), which, from its locality as well as its contents, being ourselves without much experience, we suppose to be a safe guide for those who propose to embark in the business. If in addition to this we could be favored by Doctor UNDERHILL with a sketch of his observations and experience in the cultivation of the grape for the table, we could not offer to the readers of this work a more acceptable or valuable present.

The Doctor's experiments have now been long continued, extensive, expensive, varied and successful; and we are glad to say that one result is, that while many have been deterred from going into the business from an apprehension that any addition to *his* supplies would overstock the market, we have understood, but not from him, that he sends to the New-York market, some \$8,000 or \$10,000 worth in a season. Be that as it may, it is certain that he gets double the price for his grapes now that he did thirteen years ago, and feels confident that no amount of production that can take place will keep way with the rapidly increasing consumption of and demand for table grapes. He who is so familiar, by much experience, with the subject, is well convinced that, of all others, the culture of grapes opens now the most inviting field for the investment of capital and the exercise of horticultural enterprise in the neighborhood of all our large cities; and we understand him to be well provided to supply the materials and necessary instructions for carrying it on to those who may be inclined to embark in it. Nothing, we may add, could be more discouraging than his first experiments, and the obstacles he encountered for several years—obstacles which too easily overcome the timid and the indolent, but which have in his case been con-

quered by that intelligent and well-directed perseverance which usually conquers difficulties in every walk of life, and by which he has even conquered, after years of mutual warfare, that loathsome and pestiferous insect, the *rose-bug*.

For the table, the Doctor relies mostly on the *Isabella*, though, as will be seen, the *Catawba* has preference in the wine-making vineyards of Ohio. We are not without hope that the Doctor may find leisure and inclination to favor our readers with practical hints that may assist to smooth the way to a general enjoyment throughout the country, of this delightful fruit, except so far as the difficulty in the way of it may continue to consist in that disreputable *supineness* which alone need prevent any man who has a rood of land from having, for every member of his family, and every neighbor or friend who visits him, at least as many delicious grapes as they may choose to eat.

Speaking on the experience of fifteen or twenty years, Dr. Underhill believes the grape crop, with good management, to be in itself less precarious than any field crop cultivated in the country—less so in America than in Europe, and far more remunerating.

To show how precarious is the product of grapes, as connected with the manufacture of wine, in the best wine districts on the Rhine, we may refer again to a recent exposition of *Rhenish Industry*. It is there stated that to one good vintage there are estimated two of ordinary yield, two of poor crops, and one total failure; so that the hard labor in the vineyard is accompanied by never-ceasing anxiety of the owner for the result of his toil.

A table is given of the product of wine in the Rhenish provinces through a succession of 24 years, ending with 1842; and the quantity fluctuated between remarkable extremes—as, for instance, from a minimum of 14,674 eimurs up to 854,000. The average of the 24 years was 359,058 eimurs, or 5,385,000 gallons, as the production of 48,968 morgens, or 31,195 acres—being nearly 185 gallons per acre. In the twenty-four years quoted, two were average years, twelve were below and ten above the average.

It will be seen in another place that Mr. MOSHER, of Ohio, estimates at a higher rate than this the vineyards of that State. One acre of ground, he says, planted six feet by three apart, will contain about twenty-four hundred vines—consequently, will yield about one hundred and fifty (150) bushels of well-assorted grapes, which will make three hundred gallons of wine—sometimes a little more. "I give," he adds, "three hundred gallons as the full average quantity of wine made to the acre in the neighborhood of Cincinnati."

Dr. U. as has been said, rather prefers, for the New-York market, the *Isabella* to the *Catawba*; but says both have been improved by cultivation in the last fifteen years, *very much beyond what is generally believed*; and, though himself in the market as a vender of grapes, on a very large scale, is going on to extend his vineyard every year, and recommends it most strongly to others. More than four years ago he had twenty-two acres in grapes, having, after some years' trial, banished all foreign grapes from his vineyard, satisfied that they cannot be economically adapted to open field culture in our country, under ordinary circumstances. We understand the price of two-year old rooted vines, by the hundred, to be about 20 cents each; and that an acre set in them, all expenses told, will be about \$600; while in Ohio, Mr. Mosher says, the preparation of the ground for a well trenched vineyard, adding the cost of twenty-four hundred vines, at sixty dollars per thousand, or six cents each, for one-year old vines (the customary price in that market), with the cost of planting, will make the expense of



one acre, exclusive of land, stakes, &c. at least *three hundred dollars*; or, without trenching, about two hundred.

The positive and comparative excellence of the Catawba and the Isabella probably depend, in a great measure, on the care which has been bestowed on their improvement by cultivation, by different persons and in different places. While Dr. U. seems rather to give the preference to the Isabella, Mr. LONGWORTH, of Cincinnati, very high and respectable authority, is in favor of the Catawba, and has even discarded the Isabella altogether from his vineyard. He says, in a letter to the editor of the *Indiana Farmer*, paraded in the *Government agricultural paper* at Washington—"The Catawba grape is a good table grape, though not entirely free from a hard pulp; but as a wine grape, in our climate, I consider it *superior to all others*—capable to make a wine to rival the best hock and Champagne wines; and that Major ADLUM, in introducing it, has left a mine of wealth to the people of Ohio." The Isabella, he says, "succeeds better at the East than with us. I deem it a poor table grape, and worthless for wine, and have extirpated it from all my vineyards. With two pounds of sugar to the gallon, it makes a pleasant sweet wine."

If we can't find room in this, we will make it in the next No. to enter upon this subject, at least so far as to give ample information to all who have control of the smallest piece of ground—fully agreeing in opinion with Mr. HOARE, an author of the highest authority, that "of all the productions of the vegetable world which the skill and ingenuity of man have rendered conducive to his comfort, and to the enlargement of the sphere of his enjoyments, and the increase of his pleasurable gratifications, the VINE stands forward as the most preëminently conspicuous. Its quickness of growth—the great age to which it will live; so great, indeed, as to be unknown—its almost total exemption from all those adverse contingencies which blight and diminish the produce of other fruit-bearing trees—its astonishing vegetative powers—its wonderful fertility—and its delicious fruit, applicable to so many purposes, and agreeable to all palates, in all its varied shapes, combine to mark it out as one of the greatest blessings bestowed by Providence to promote the comfort and enjoyments of the human race."

Concurring in the foregoing eloquent eulogy on the grape, we shall not, however, look so much to foreign authors as to American experience for the instructions we shall offer, as that experience shows that in few things does the difference of climate exert a greater influence, demonstrating that European practice in the culture and management of the grape is not suited to our country.

We must content ourselves for the present with Mr. Mosher's letter on the establishment of a vineyard. Hereafter we shall supply the reader with the best information to be had on the culture of vines on a small scale for family use; and that information we shall dedicate to the housewife, by whom we verily believe it will be better attended to than by the *husbandman*.

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From the Cincinnati Farmer and Gardener.

#### CULTURE OF THE GRAPE.

As public attention at the present time seems to be somewhat enlisted in the culture of the grape, and as its success is pretty well established in the vicinity of Cincinnati, where it is rapidly extending, a brief sketch of the most approved mode of establishing a vineyard may be acceptable to some of your readers.

The first step then, is the preparation of the ground. The sides or tops of limestone hills are generally chosen for the location, where the water runs off readily. South and south-eastern exposures are the best in this climate. Three modes of preparing the ground are

usually adopted here. The first consists merely in deep plowing, with a common plow, as for potatoes, and making the surface fine and mellow with the harrow. The second method goes one step farther, and a second furrow is cut in the bottom of the first; in the bottom of the second furrow a subsoil plow is run, which breaks the ground, altogether, to the depth of sixteen or eighteen inches; it is then harrowed and prepared as in the first. The third method is by thoroughly trenching with the spade, to the depth of not less than two feet. If the hill-side is steep, (say at an elevation of twenty or thirty degrees with the horizon,) terraces are also raised from two to four feet in height, and extending up the hill from twenty to sixty feet each, according to the acclivity of the surface. By this last mode, the top soil is all thrown into the bottom of the trenches, and the subsoil, which is generally clayey, thrown upon the top, and left sufficiently smooth for planting. Where stones are found in the soil, they are thrown out on the surface, as the trenching progresses up the hill, and if in sufficient quantity, are laid up in walls to support the terraces. The terraces are made to run horizontally along the hill side, or nearly so, with an open ditch for a drain at the upper edge of each terrace, and a similar horizontal ditch as often as once in eighty or a hundred feet, where the ground is not terraced. These drains should lead to the lowest point in the vineyard, where a suitable drain should be constructed down the hill to carry off the surplus water in heavy showers, and may be covered like a culvert, or left open. In each case the vines are planted in rows, four feet apart if to be worked with the hoe and spade, and from five to six feet if to be worked with the plow or cultivator, and should always run horizontally with the terraces and drains. The distance between the vines in the row varies from two and a half to four feet, according to the mode of training which is to be adopted.

Cuttings of the vine, with three or four eyes, are sometimes planted, at proper distances, in the vineyard; but the usual practice is, to plant them first in a nursery, in rows, about eighteen inches apart, and from four to six in a row, to strike root; here they are to be well cultivated, and allowed to grow one or two years, when they are taken up in the spring and planted out in the vineyard. The fourth year from the cuttings, (that is, after they have had three summers' growth—two in the nursery and one in the vineyard,) they may be allowed to bear a full crop, or nearly as much as they ever should be allowed to bear thereafter; which is about one-fourth of a peck of grapes to each vine. One acre of ground, planted six feet by three apart, will contain about twenty-four hundred vines; consequently will yield about one hundred and fifty bushels of well-assorted grapes, which will make three hundred gallons of wine—sometimes a little more. An acre of good ground, well trenched, and planted with Catawba vines, after it has acquired six or seven years' growth, may be made to yield a much greater quantity; and some small vineyards below Cincinnati, on the hills of the Ohio river, have produced at the rate of eight hundred gallons per acre; but the vines were planted four feet each way, making twenty-six hundred and forty vines to the acre; but the proprietor admitted that his vines were injured by overbearing, and that his wine was inferior in quality when allowed to produce that quantity.

I give three hundred gallons as the full average quantity of wine made to the acre in the neighborhood of Cincinnati. Of course, much variation will depend upon the manner of establishing a vineyard, and its subsequent treatment.

The comparative merits of the different modes of preparing the ground for a vineyard cannot, as yet, be settled by experience in this part of the country, as the oldest vineyard, I believe, has not been established more than twelve or thirteen years. Vineyards planted at Vevay, in Indiana, by the Swiss, merely on deeply plowed ground, failed in fifteen years. When the ground is plowed eighteen inches deep, it may bear tolerably well for twenty years; but a vineyard planted on ground well trenched two feet deep, and properly drained and cultivated, may be expected to last fifty or one hundred years—perhaps more. The crop, also, is much more certain when the ground is well trenched, not being so liable to suffer from drouths or rainy seasons.

The advantages of deep trenching have become so apparent to those who have had the most experience, that nearly all who can afford it are now preparing their ground in this manner, although done at an expense varying from eighty to one hundred and twenty-five dollars per acre, according to the character of the ground. This, with the addition of twenty-four hundred vines, at sixty dollars per thousand for one-year old vines, (the customary price in this market,) with the cost of planting, will make the expense of one acre, exclusive of land, stakes, &c. at least three hundred dollars, or, without trenching, about two hundred.

S. MOSHER.

**LARGE FLEECE.**—A specimen of wool from the Lincolnshire breed has been exhibited to us by Rev. Dr. LANG, inclosed to him in a letter from D. W. HORNE, Esq. of Jackson county. It was taken from a lamb of only a year's growth, raised by Mr. H., and for length and fineness surpasses anything we have ever seen. The sample shown us was *eleven and a half inches* in length, and from a fleece which weighed *ten and a half pounds*. There is no country better calculated for sheep than Florida, and yet very few of our planters keep enough even to supply their own tables with mutton. We hope to see things changed in this respect before long, and wool form an item in our exports.

[Tallahassee Floridian.]

## THE "WHITE FRENCH GRAPE."

## PERFECTLY ACCLIMATED IN PENNSYLVANIA.

Extract of a letter from Jos. C. G. KENNEDY, of Meadville, Pennsylvania, to J. S. SKINNER, Cor. Sec. of the Col. Horticultural Society.

I CANNOT let this opportunity pass without mentioning the existence of a *very fine variety of grape* in this section of our country. The vine was found by the early settlers of this region, in two or three places in Venango county, near the mouth of French creek, where Franklin is situated, where formerly stood a French fort. The French had at an early day a line of military posts from Fort Du Quesne (now Pittsburgh) to Canada. It is in the neighborhood of Franklin where the grape is found growing wild, or was so some years since; it is now cultivated in a few gardens. The grape is white, of large size, thin skin and fine flavor; in appearance resembling the white grape brought from the West Indies to your market, but larger. The vine, if of foreign origin, has become *perfectly acclimated, is very hardy, and a good bearer*. I doubt not it would prove a valuable acquisition if propagated more extensively and brought into notice. It was found, uniformly, growing on low grounds, and near water. I have heard its existence in these parts accounted for in this way, viz: during the occupancy of the military posts by the French, a keel-boat was at one time wrecked in the river near Franklin; that on board of her were grape cuttings or vines, destined for Canada; that those cuttings, lodging on an alluvial shore, took root, and thus the origin of what with us is termed "*the white French grape*." I am cultivating a few vines, which would have enabled me to say more concerning them and their produce, had not the nipping frost of 2d June destroyed their blossoms, an occurrence proving no tenderness, as the *white-oak leaves* in some places shared the same fate, and they are esteemed a *hardy plant*.

## GERMAN PLOWS AND PLOWING.

How do these implements, used on the Rhine, compare with ours? BANFIELD, in his work just published, says—

Besides the large estates in the Grand Duchy of Darmstadt that we have already noticed as under scientific management, we may name the estate of Baron Von Babo, near Weinheim, as very accessible from Heidelberg. From Baden-Baden excursions may be made to Rothenfels and Augustenburg, country-seats belonging to the Margrave William of Baden, which have long served as pattern farms. Baron Von Babo is an author on agricultural subjects, and the result of a few out of numerous experiments that he has caused to be made with plows, will both show the interest with which intelligent farmers follow improvements in Germany, and will throw a useful light on the plow of the Palatinate, which we before praised as well adapted to the soil. One of these, with a plow in use on the Bergstrasse, a Flemish wheel, and a Flemish swing-plow, being tried against each other in a dry, stony soil, the result was—

Plow used.	Depth of Furrow.	Breadth of Furrow.	Power used in draught.	Remarks.
	Inches.	Inches.	Cwts.	
PALATINATE.				
(Ladenburg) .....	6	9	4.9	Furrow clean and clod well turned.
(Strassenheim) .....	6	9	3.3	Furrow not clean or well turned.
BERGSTRASSE.				
(Wiesloch) .....	4	7	3.5	Furrow shallow, well turned.
Flemish with wheels .....	6	9	3.0	Not so well cut or turned as in the following, which was the best.
Flemish swing .....	6	9	2.7	

The simple form of stating the results of the trial of various plows may afford a hint to Committees appointed to award premiums for American plowing.



## TYPHOID PNEUMONIA.

BY ROBERT W. GIBBS, M. D. OF COLUMBIA, SOUTH CAROLINA.

AT page 96 of the August No. we took the liberty to call on the author of the following dissertation on the peculiar diseases of the South and West, and there inquired—"Are not such questions intimately connected with the interests of Agriculture?" and we might have added, *humanity*! at least when that interest is viewed in the broad light that we understand and propose to discuss and defend it.

For a man thinking, as too many ever are, of swelling the current that flows and flows, and will, it seems, forever flow, from the old Atlantic to the South and West, what more interesting subject of inquiry than the diet, climate, and diseases connected with these lands of promise, and with any particular race or description of population?

Immediately after the above was written, and just too late to arrest it, we received the following, for which many of our readers, farmers as well as medical men, will unite with us in thanks to the author.

[The following article was published in October, 1842, in the American Journal of the Medical Sciences. It was copied into one of the agricultural papers of South Carolina, and, by request, has been revised and had some additions made to it for publication in the Farmers' Library:]

THIS disease prevails extensively during the winter months on our river swamp plantations in the Southern States. It destroys more negroes than all others combined, to which they are ordinarily liable. It is a matter of surprise that southern physicians have published nothing in relation to it. In the whole series of the American Journal of the Medical Sciences, there is but a single communication on the subject, and that is of an epidemic which prevailed in the West, and was confined chiefly to whites. I have for twelve years been familiar with this epidemic in the neighborhood of Columbia, and, having had a large number of negroes under my care, my experience of it is published with the hope of adding to the knowledge of its causes and treatment.

I would here premise that I am fully impressed with the conviction that the treatment of negroes must differ much from whites. The negro lives a life of constant exercise, and exposure to changes of weather; he uses a diet seldom varying, mostly vegetable; he has a fixed and certain amount of labor to perform; and he usually indulges in no excesses. The action of his system is more equable; his nervous power is more regularly distributed; and the various functions of the organs are less apt to be impeded than with whites, who live more or less irregularly. Negroes suffer more from the diseases of cold weather, and but little from heat; they are less liable than whites to inflammatory affections; inflammation is not so active, and is much more readily controlled, with them; they are more easily brought under the influence of medicine, hence their diseases are more curable. I speak of plantation negroes; those who are employed in domestic attendance on families and in cities, differing in their habits, have their complaints modified by their employments, and are assimilated more to the condition of the whites. Under similar circumstances, a single bleeding, followed by one or two doses of medicine, will control a case of acute pleurisy in a negro, while three or four times as much bleeding and treatment will be required by a white man of apparently similar strength. Negroes bear depletion badly, and stimulants well. The Thomsonian or stimulating steam practice agrees well with them, while it is injurious and destructive to whites. Opiates produce more decidedly beneficial effects on them, and much less injury or unpleasant consequences.

The disease of which I write is known by various names, according to the predominance of particular symptoms. The more violent cases being suddenly taken with a chill and cold skin, and dying often without any reaction, it is sometimes spoken of as the *cold plague*. The head being almost always affected, and be-

fore the pneumonic symptoms are developed, it is called *head pleurisy*; and symptoms of prostration and continued debility, with pain in the chest, and cough, being usually present, the term *typhoid pneumonia* is most commonly applied to it by physicians: in the fall or spring, when bilious symptoms exist, it is called *bilious pleurisy*.

It occurs mostly during the prevalence of long-continued cold spells, and more frequently with wet weather. It is rarely found on highland plantations, and if at all, is confined to such negroes as are more or less exposed to work in low and wet grounds. On swamp plantations the disease is epidemic; but as far as my experience extends, I have known but few cases on upland settlements.\*

I have met with most cases in January and February, although it frequently commences in November and continues until spring. During the winter of 1841, the weather was unusually variable, with much rain, but so little intense cold that there was no ice continuing for more than a day or two, and none thick enough to be preserved. On the plantations in my charge, where there are about twelve hundred negroes, there were then fewer cases than usual—in all, probably, not over fifty—while during the next winter, on one place, among three hundred there were seventy-two cases, and on another, forty-seven among a hundred and fifty.

Old negroes, and such as are weak from any previous disease, are more liable to be attacked. Children under ten years are not often affected; yet I have known several cases of five or six years of age, where death has been sudden, with similar symptoms as in the adults; these have usually been such cases as the old women call *wormy*—children of weakly constitutions, who have suffered more than others from worms. When such children are attacked, they rarely recover.

Where the disease is violent in its attack, the patient suddenly becomes cold and pulseless, lethargic, and often insensible, without previous complaint; and I have known cases found dead, or die within three or four hours from being apparently well.

"Jan. 12, 1842. I was sent for to-day to see a case which I found in *articulo mortis*, January, æt. 32, strong and active; plowed yesterday until 12 M.; felt badly; had pain in head and chest; came home; was very giddy; skin cold and pulse very small and quick; sinapisms were applied to the extremities, and a blister to the chest; a dose of *ipécac.* was given to him by the overseer; he vomited freely, but no reaction came on. I found him at 11 A. M. with a cold skin, thread-like pulse, breathing quick; complained of pain over the eyes; *his intellect was perfectly clear*; tongue red at the edges, covered with a dry, brown crust; throat and mouth dry and parched, with sordes about the teeth; chest sounded clear over its whole extent; was powerless. Hot applications and stimulating frictions had no effect on his skin; carbonate of ammonia with whisky toddy had no influence on his pulse; he died at 6 P. M."

In this case the patient seemed to die from a direct prostration of nervous power; and the clearness of intellect was a remarkable symptom.

Jan. 30. I was called to a case taken late last night with chill and cold skin; pulseless; pain in head; lethargic; unable to move himself; he had sinapisms, stimulating frictions, pepper tea (infusion of capsicum): was dead at 10 A. M. when I reached him.

"Bob, æt. 35, was apparently well; about 12 M. said he felt cold and weak; the overseer sent for me a distance of seven miles; I reached him in about four hours; he was then dead.

Several other cases of the disease occurred on this place at this time, of mild form; others more severe occurred afterward; I did not for a moment doubt that he died from it. I have frequently been called to cases of twelve or twenty hours' standing, and found them dying.

"Nat, æt. 55, worked in the field and did his full task; came home in the evening well; sat by the fire and talked as usual; about 9 P. M. complained of feeling weak and cold; the nurse was not sent for; he was covered with blankets and remained, as was supposed, asleep until morning. I was called to see him; found him cold, insensible, pulseless. The nurse had given him warm

\* During the past spring (1846) I understand it has prevailed on several upland places in St. Mathew's parish, S. C.  
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pepper tea (which is much used on the southern plantations as a stimulant and diaphoretic); he swallowed with difficulty; I directed cataplasms of mustard and frictions of hot turpentine, with warm toddy internally. After a few hours, much against my expectation, he was roused; feeble reaction took place; his pulse never became full; I directed the toddy to be continued, with two grams of quinine every third hour. He improved slowly for several days, but continued very feeble; gained a little strength; was able to sit up for a short time; his tongue was red at the edges, with a dry, brown crust; became moist after three or four days; an occasional mild laxative was given him; but whisky, and quinine, and soup were constantly given. I considered him doing well, and slowly convalescing; no pneumonic symptoms, but a very slight cough appeared; a cold, rainy change of weather came on; on that night he had a chill, and died in a few hours."

Frequently have I known cases convalescent, able to walk about, free from all symptoms but debility, yield suddenly to a cold change of weather, and die in a few hours—or linger several days with pneumonic symptoms. If a case has been much enfeebled by a first attack, a second is very likely to prove fatal. A cold and windy change often aggravates symptoms which were mild and favorable. On one occasion I left five cases doing well, with no serious symptoms; a very cold, drizzling rain set in toward evening; on my visit next morning I found three of them with bad symptoms; one died on that day, seemingly of debility; the others were kept up by strong stimulants and large doses of quinine. One of them continued very feeble for several weeks; a large abscess formed on the leg, which was opened; it discharged very copiously, and exhausted her so much that she died next day, in spite of tonics and stimulants.

The following is a fair specimen of the severe form of the disease at its commencement, and is a good illustration of my view of the treatment required. I would here premise that I have known venesection practiced frequently in the cold stage, and I have never seen a case recover, and rarely even if used after reaction. I have heard physicians say, if they could get to the cases early, and bleed, the patients were generally safe. *Those cases which bear bleeding would get better without it.* On one plantation, a few years ago, the first five cases which occurred of this disease, commencing with pain in the head and chest, were bled by the overseer, who undertook their treatment: every case terminated fatally. He became satisfied that some other treatment was necessary. I was sent for, and introduced the treatment by stimulants, opiates and revulsives, and twenty-three cases which occurred all recovered. In this disease, if the patients are immediately attended to, it is found quite manageable, as much so as an ordinary catarrh; but beware how depletion is practiced; if the symptoms are neglected for twelve or twenty-four hours, and are at all aggravated, they are very apt to die.

"*Sunday, February 13th, 1842.* Bess complained last night of headache; did not sleep well; early this morning was seen by the nurse; was drowsy; complained of pain over the eyes; pulse was small and skin cold; whisky and infusion of capsicum had been given, and sinapisms applied to the extremities. I found her at 10 A. M. with skin cooler than natural, though not cold; is now sensible, but very giddy upon any attempt to raise her head; complains of severe pain over the eyes; pulse is small and irritable, 100 by the watch; feels very weak; tongue is red, looks like raw beef, very dry; breathing rather slow; no cough nor pain in the chest. I directed 2 grs. camphor, 2 grs. calomel, and 5 grs. Dover's powder every two hours, until three doses were given, and the whisky toddy to be given in small portions every hour, unless the skin became hot; and after three powders, if the skin was not so, to continue them every third hour until next day, with warm serpentaria infusion after each dose." "On Monday I saw her, and found her free from headache; had slept well; skin was in good condition, soft and natural; pulse 80. She took six powders; after the third she perspired freely, and the headache went off; her tongue was now moist and with a whitish fur; paler at the edges; feels much better, but is weak. I directed serpentaria and Epsom salts to be given this morning, and a full opiate at night. On the next day she was convalescent."

Such cases as this are very common, and, where the nervous power is soon roused, and its tone restored by opium, camphor, &c. and diffusible stimulants excite the circulation and restore free capillary action, *no pneumonic symptoms*



*appear.* Where the nervous system is in a depressed state, and an effort at reaction is unsuccessful, from a want of energy in the brain and spinal nerves, congestion of the lungs or brain takes place, which continuing, in the former gives rise to pneumonic inflammation; the vascular fullness arising altogether from nervous debility.

I consider typhoid pneumonia among negroes as an adynamic disease, in which *the nervous energy of the patient is directly debilitated by the sedative influence of cold.\** If reaction take place, the nervous system must be braced up and kept steady, while such means are used to control local inflammation as will not reduce the general strength. The disease is, then, one of irritation, and not of inflammation. The blood is altered, and resembles bloody serum—thin, watery, and dark colored. The tendency to sink is so great that general depletion is highly injurious, and local bleeding must be practiced with great caution. Small doses of calomel, as a general alterative and excitant of the secretions, with camphor and opium, and, with much debility, carbonate of ammonia and alcoholic stimuli, producing diffusion, with free vesication, are the important indications required. Laxatives, and not drastic purgatives, aid materially in the treatment.

The following cases are examples of the mild form of the disease:

"Feb. 11th, 1842. Chance, æt. 13, complains of pain in the head, over the eyes; is giddy; skin dry, but of ordinary temperature; tongue slightly furred, redder than natural; no cough; pulse small, soft, quick, 130; breathing natural. I directed calomel 2 grs. Dover's powder 10 grs. camphor 2 grs. to be given, and repeated in two hours; each dose to be followed by warm infusion of serpentaria; as soon as he sweats, stop the powders; early to-morrow give him a dose of calcined magnesia."

"12th. Is much better; pulse below 100; sweated freely yesterday; slept well; pain in the head very slight; skin soft. I prescribed the continuance of the infusion of serpentaria, with 8 drops of laudanum every third hour until bedtime."

"13th. Is convalescent; pulse 80."

"Feb. 11th. Sally, æt. 11, has pain over the eyes; cough and pain in the chest; pulse small, 140, soft; nostrils run freely; breathing hurried; is weak and seems distressed. I prescribed calomel 2 grs. Dover's powder 5 grs. every third hour, with infusion of serpentaria; she had taken in the morning salts, which had operated three times."

"12th. I found her better; headache lessened; pulse 100; cough loose; expectorates freely; she sweat freely after three powders. Continue the same treatment."

"13th. Pulse 80; skin soft; slept well last night; feels very well but weak; cough loose."

Such cases constitute a large number of those which occur, and yield readily to small doses of calomel, combined with opiates and warm, stimulating infusions. In some of the cases there are no other symptoms than of debility and wandering pains in the back, loins, shoulders, or legs. Occasionally an acute pain in the ball of the eye, in the ears or side of the neck, with stiffness of the muscles, is present. In severe cases the tonsils, sub-maxillary and sub-lingual glands, are swollen, with acute pain in swallowing, and these are usually the worst. Where pneumonia becomes developed, the calomel and opiates are continued every third hour, for 36 or 48 hours, aided by the warm infusion of serpentaria and laxatives, with blisters to the chest; usually the symptoms yield in this time, although they sometimes run on for six or seven days; *this, however, is not often the case, unless depletion be practiced.* The hot skin and fever, with bloody expectoration, frequently induce the practitioner to draw blood; but it is usually thin and watery—looking more like a colored serum than blood, and resembling what is taken from dirt-eaters—having but little coagulum, and that loose and nearly black. The pulse, though frequent, and sometimes full in these cases, feels more as if filled with air than fluid, and is easily compressed—frequently it has the wiry, shattered feeling of anæmia. The blood expectorated is dark colored, and the expectoration viscid and tenacious; it is often of a bilious-looking fluid, which I consider a favorable indication.

\* Since this article was written, I have had reason to believe that the *sedative influence of cold* is not the only cause. I have seen cases originate in warm weather, and am disposed to think that variations in the electrical state of the atmosphere deprive the nervous system of energy, alter the blood, and dispose to this disease. The electrical condition of the atmosphere varies with temperature and moisture.

Frequently the pulmonary symptoms yield suddenly, and a metastasis occurs; and this is another argument in favor of my opinion that this disease consists in irritation and irritability, affecting the nervous system continuously with its existence.

I remember one case in which the pulmonary irritation was very great for two days, with much pain and difficulty of breathing; suddenly a most intense pain, with great tenderness, attacked the peritoneal covering of the liver, and the cough and pain in the chest ceased. Five grains of calomel, twice repeated, followed by oil, gave relief, and no farther difficulty occurred—the girl convalesced directly.

Where metastasis occurs to the bowels, and hemorrhage results, the discharge is critical; when to the peritoneum, it is usually fatal; when to the brain, it almost invariably terminates in effusion. If much depletion is used in the treatment, the liability to metastasis is much increased, especially to the brain.

The cases require to be carefully watched, as they vary much in their course, although the primary symptoms are similar, and usually yield to the general treatment.

On two occasions, where the pulmonary symptoms subsided, and metastasis to the brain took place, with great congestion, I opened the temporal arteries, with temporary relief, but death by effusion followed soon after in both. The congestion was, no doubt, venous from weakness in the brain, and not arterial, which is connected with high action.

I do not think the distinction is sufficiently noticed between congestion and inflammation; in the former condition, the distension of the *veins*, with symptoms of diminished sensibility in the nervous energy of the organ, is the predominant symptom; in the latter, accelerated *arterial* action, with increased sensibility, is apparent. If the venous congestion is but temporary, and the nervous energy not much depressed, active inflammation occurs, when by reaction an effort is made by the arteries to repair the effects of the temporary delay of the circulation in the veins. If the nervous energy is free and cumulative, strong inflammation is the result. If congestion from a debilitating cause has occurred, and has remained long enough to oppress still more the vital energy of the affected organ, the weakened power of the arteries, when they receive the transfer of the load which reaction throws off from the veins, is such as to induce only a sub-acute inflammation in the organ. This state is removable by diffusion, diaphoresis and revulsion, at the same time that the nervous energy is restored, so as to prevent again the recurrence of the congestion, which would arise from its deficiency.

With the aid of nervous power, the arterial system repairs most of the injuries to the organs; if that is strong, too much action is developed by the arteries in this function; if they have but little aid from it, their effort soon ceases, they become rapidly exhausted, and effusion results. A proper balance can only be restored to the circulation by the regular renewal of the accustomed supply of nervous power.

That this disease may and does assume a different form, requiring different treatment, in other localities, I would not presume to deny; but here, where I have been familiar with it for a long time, and had extensive opportunities of studying its phenomena, I am satisfied that facts will bear me out in my opinion of its character. The type of this disease is that of *adynamia*; but, with a debilitated nervous system, local inflammation of a sub-acute character arises in congested organs; and it is all-important to remove the latter condition by such means as will not only not reduce the former, but support it. The symptoms in the attack are often such as would indicate depletion as necessary—such as pain in the head, giddiness, lethargy, &c.—but,

“Vascular energy is wholly derived from the nervous system. If, by any means, the nerves destined to supply any vessel or set of vessels with this energy become debilitated or destroyed, then these vessels cease to be capable of duly performing the function of propelling the fluids to and from the heart; and therefore it inevitably follows that turgescence, more or less severe, takes place, and results in disease, depending on the organ affected for its particular character.—Thus a sudden, temporary suspension of nervous energy in the vessels of the brain, rendering them for the moment incapable of propelling forward the blood, may occasion giddiness, dimness or distortion of vision, &c.; and, if these symptoms are neglected, this temporary becomes a lasting loss of energy, producing

either immediate death or a total suspension of vital power in the parts dependent upon the debilitated nerves."\*

The symptoms of debility, and especially the cold skin, point out to us the necessity of stimuli being required. The subsequent feebleness during convalescence—the extreme debility following the sanguine depletion in the cold stage of intermittents, with the very doubtful success of that practice, should make practitioners remember that the symptoms present may arise from a very opposite state of the system than one calling for blood-letting. I believe the pain in the head in this affection is neuralgic. I have seen it relieved in a few hours by laudanum, or camphor and opium; and I have often given quinine and whisky with advantage to it. The quick, soft pulse is one of irritation, not oppression, (as some consider it)—indicative of an irritable condition of the nervous system, and not an index of the amount of sub-acute inflammation in the lungs. The condition of the pulse alone will frequently mislead the practitioner (as it too often does in scarlatina), if he depends on it as a guide in diagnosis; and I have seen medical men differ in opinion about it, taking directly opposite views of the indications. The small, weak pulse is often considered as that of oppression, and the shattered thrill taken for wiriness and hardness.

The case which the venerable Dr. Parrish was accustomed to relate as having occurred while Dr. Wistar was in Edinburgh, here presents itself to me:

A dog was bled to death by him and other students. Just before he expired, an eminent practitioner stepped in; not being aware of what experiments were in progress, he was asked to place his hand on the dog's heart, and say whether the action was *sthenic* or *asthenic*? He did so, and declared the condition *sthenic*.

I have often noticed at the close of fatal diseases, especially in nervous constitutions, the action of the heart and carotids, and been struck with their apparent *sthenic* action for hours, when debility had been gradually increasing from steadily failing nervous power, and the system becoming progressively exhausted. In the disease of which I am treating, I have never known, in a single instance, the pulse to rise and fill out after venesection, or become slower, which should be the case if the frequency depended on inflammatory congestion. Often have I known it become smaller and more rapid; and I now never think of bleeding a negro in this disease. Where the pain is pleuritic, and the cough dry, which is sometimes the case, dry cups to the chest and free vesication usually give relief, with the full and free use of opiates. As I mentioned above, negroes bear opiates much better than whites, and seldom suffer from any of their bad effects.

My object in the preceding paper being to give a practical article, and to lead the profession to the notice of this disease, I have made no references to previous accounts in the books of similar epidemics in other countries. I differ from some of my professional brethren in my view of the treatment of this affection, and I can only say that my success in the treatment will bear me out in my opinions, whatever value may attach to the theory. During the winter of 1840-41, out of fully two hundred cases, there were only five deaths. My experience since confirms my satisfaction with the practice. I find that special attention by the planters to keep the houses of the negroes dry and well supplied with fuel, while they are well provided with blankets and warm clothing, has greatly diminished the number of cases on the plantations which I attend.

In conclusion, I would ask the attention of practitioners to an extract from Dr. Mott, who has had much experience in disease. He says:

"There is nothing more important in the walks of medicine and surgery than for the practitioner to make a distinction between two opposite states of the system" (irritation and inflammation); "and, if great opportunities of observation in various countries could authorize me to form an opinion, there is no fact more incontestably established than that the most fatal results in the practice of our profession are to be imputed to a total misconception of these lines of demarkation." [Travels, p. 41.]

NOTE.—"Nurse" on a Southern Plantation.—The office of "Nurse," so familiarly referred to by the writer, and which he supposes every one understands, is one of no little responsibility and importance on a southern plantation. On all these of any considerable force and extent, a house of ample dimensions, and with all the proper appointments and appliances, is set apart as a regular infirmary or hospital. For the duties of a nurse (to reside in the hospital constantly), an

\* Holland.  
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elderly woman, generally, but always one of the most trustworthy and intelligent, is selected and invested with all necessary power and authority. Much experience, under the guidance, in critical cases, of the best physician in the neighborhood, qualifies her to prescribe in all ordinary cases, with judgment and success, and in cases of more serious character, some near relative, as the mother of the patient, if a child, or the wife or sister of the man, if an adult, is, at the suggestion of the nurse, detailed to assist in the care of the sick. The hospital is kept constantly supplied with suitable medicines, and such materials for diet and drink as are suited to the common maladies of the country, and the exigency of the case. If more extraordinary and alarming symptoms supervene, a physician is sent for at the discretion of the nurse (if distant from the proprietor's residence), who will understand that forbearance to do so is not to be practiced at any risk to the patient. Calls are made in all cases of need, and without scruple, on the master, and more especially on the mistress, for anything in the way of nourishment or delicacy that the family stores can supply; and to withhold personal attention and sympathy would be an exception to the general practice and feeling of the country. Some of these nurses acquire wide and well established reputation for skill and tact, and are often sent for and allowed to attend in the sick room of the most respectable families, especially in obstetrical cases; and for their services some of these colored women, slave nurses, derive in the course of the year considerable income—much more than white women laborers in Europe obtain from the severest daily labor throughout the year.

On one estate near Columbia, it came under our observation that at an early stage of pregnancy the women are required to refrain from field labor, to retire to their house, and yet every day, in good weather, to take a certain quantity of bodily exercise. We are persuaded that the system for the care and protection of the sick and disabled is in no country in the world more thoroughly arranged, or the provision more humane and complete than on the large plantations in the south. One rule on the estate to which we have referred, near Columbia, is to provide for them an abundance of warm clothing, and to have wood in such abundance at their doors as that it may be burnt at pleasure—leaving them no occasion even to remain stationary, much less to sleep in wet clothes.

This humane forethought on the part of Col. H. is worthy of all imitation, no less as an example of humanity than as an economical and the most effectual preventive of the Typhoid Pneumonia. It may be added that these particulars are derived in great measure from the slaves themselves, and from personal inquiry and observation. Returning, in April last, from the superb residence of Mr. TURNBULL, near St. Francisville, we inquired of his driver "What house is that?" The answer was, "That, sir, is the hospital;" and he went on to say, that as soon as any, especially any of the children, were taken sick, they were sent to that house, to be looked after by master and mistress, as the cure of them would not be trusted to any one, even their mother, exempt from their personal watchfulness and attention. *Honor to whom honor is due.*  
[Ed. Farm. Lib.]

## THE NEW-ENGLAND FARMER.

WE heartily concur in what follows from *The Cultivator*, as to the *NEW-ENGLAND FARMER*. It is the first intimation we had of the discontinuance of, we believe, the third agricultural journal established in the United States. *THE AMERICAN FARMER*, at Baltimore, still flourishing in a green old age, being the first, *THE PLOUGH-BUY*, at Albany, by Southwick, being the second, and *THE NEW-ENGLAND FARMER*, now no more, the third.

Though we have not had the pleasure (7th July) to see a copy of "*THE HORTICULTURIST*," for which Mr. BRECK acts as agent at Boston, it is not to be doubted that with such Editor and Publishers it will be brought out, as to matter and manner, in a style to deserve extensive and lasting encouragement, and we sincerely hope it may receive it.

Mr. BRECK, Editor of *The New-England Farmer*, announces in that paper of June 24th, the discontinuance of that work, which has now completed its 24th year. This paper, from its commencement under FESSENDEN, has pursued the "even tenor of its way," with less change and greater steadiness of purpose than has attended almost any other periodical in the country.

Punctual in its weekly visits, cheerful in its tone, sound and discriminating in its advice, it

was always the wise counselor of the farmer; and we part with its "old familiar face" with sincere regret—regret that we shall receive its visits no more, and regret that, in the rage for new things, it should have been so far forgotten as to afford Mr. Breck, by whom it has been conducted with great judgment; so poor a reward as to induce him, as a matter of interest, to discontinue its publication.

## IMPORTED STOCK.

DESCRIPTION OF THE STOCK RECENTLY IMPORTED BY THE MASSACHUSETTS SOCIETY FOR PROMOTING AGRICULTURE.

BY E. PHINNEY, ESQ. A TRUSTEE OF THE SOCIETY.

THE Trustees, with an honest desire of promoting the interests of Agriculture and improvement in the various branches of rural economy, had, for many years, devoted the income of the Society's funds to premiums on the best cultivated farms, on the various kinds of farm produce, farm stock, and to such other objects as they believed best calculated to promote the interest of the great body of farmers. Of the effect of their labors, the public can the best judge.

It seemed to the Trustees that very little progress had been made, particularly in the dairy stock of the country. They could point to no particular object, no decided mark of improvement or permanent change, upon which the future and progressive improvement of our dairy stock could, with any certainty, be calculated.\*

Thousands of dollars have been offered and awarded in premiums for the best milch cows within the Commonwealth, during the last twenty years, and, as appeared to the Trustees, to very little benefit. Whoever has attended our cattle shows will have occasionally met with a cow remarkable for her milking properties, which the fortunate owner purchased from some drove. This *accidental* cow is exhibited at the cattle show; well authenticated proofs of her great yield of milk or butter are produced; the owner takes the highest prize, and puts the money into his pocket; the calf is sold to the butcher; and the cow the next year is put into the beef barrel. And this has been the beginning and the end of most of the

\* We cannot, in justice to our own feelings, let pass an occasion so appropriate, without using it to express our sincere thanks, as an humble friend of American Agriculture, for the great services which have been rendered to its cause by the Trustees of this ancient and most respectable Association.

The propriety, not to say the demand, for this special acknowledgment will be better understood by the few readers who were in the habit, as we were more than twenty years ago, of noting their proceedings with a heartfelt interest in everything connected with the great subject of American Agriculture.

In all their dissertations and plans there was evinced a degree of sincere, intellectual, earnest devotion, which was calculated not merely to convey and to elicit practical knowledge and details on particular points, but to cause the best men of the land to think and to reason, as all men should learn to do who desire to understand, to influence, and to meliorate their condition in life, morally and politically.

No body can look back through their ancient archives without admiration and cordial union in the sentiment of gratitude to such men. But where is the token of public esteem and remembrance—where the legislative resolves of thanks and of medals—for these truly useful patriots—the Pickerings, the Quincys, the Lowells, the Parsonses, the Jaqueses, and a host of patriotic colleagues, whose thoughts and lives have been given to finding out and pointing out how more light and fruitfulness could be shed on the course of the plow?

Some French epicure has said that he who discovers a *new dish* confers more happiness on the human race than he who discovers a *new star*!—and, truly, our American men of influence, in and out of power, are far more ready to shower honors and fortune on the blood-stained conqueror, than to say "well done!" to those who have taught, however successfully, the arts of peace and the principles of true liberty.

What notice would a Republican Congress, representing the agricultural interest of the U. States, take of a man who should discover an effectual antidote to the Hessian fly, or a new fertilizer, ten thousand times more concentrated and more powerful than even plaster or guano?—The same that they have done of poor Fitch, or Rumsey, or Fulton, or Clinton, or Whitney, or Buel, or Lowell! *So goes the world! but we are a wise, a wonderful people!* [Ed. F. Lib.

native cows to which the highest prizes have been awarded. The writer knows not a single instance where the offspring of any one of these high-premium native cows has inherited the valuable properties of the dam in a sufficient degree to induce the owner to raise it, with the exception, perhaps, of the famous Groton cow, whose descendants, in the hands of Colonel Jaques, might have added greatly to the value of our dairy stock, had the Colonel possessed the means of carrying out his plans; and, in this instance, the valuable properties of the dam were transmitted to the progeny solely by the means of crossing with the pure breed of a foreign stock. The cautious farmer will not run the risk, nor incur the expense, of raising a calf from stock, of the origin of which, and of the blood of the various breeds that runs in the veins of his favorite cow, he knows nothing. Acting from a belief in the truth of the old adage, which has been taught him from his youth upward, that "a good cow *may* have a bad calf," he can have no assurance that the descendant of his native cow will not take its character from, and inherit the inferior properties of, some near or more remote ancestor. He had rather take his chance in the next drove that comes along, knowing that he shall at least avoid the expense and trouble of rearing a calf upon whose good properties he can make no certain calculation. Now it will hardly be pretended that the offering and awarding of premiums for this description of cows has, or ever will have, the effect to improve the dairy stock of the country.

The writer would by no means detract from the value of these accidentally good cows, the natives of the country. There are, no doubt, to be found, among the farmers of Massachusetts, many cows of native origin, possessing as valuable properties for all purposes, except for breeding, as any that can be imported from abroad. And they are not without their value as breeders, where they and their descendants may be crossed with the pure blood of some long and well established race of foreign animals. In this way we may chance to perpetuate the rare qualities of our native cows, united with the well-established traits of character of the imported stock.

It may be contended that we need not the aid of foreign stock to raise up one of the best breeds of cattle in the world. This may be true; but who will undertake it? What individual farmer has the patience, the skill, the intelligence, and the capital to engage in a task that will require many years and much capital to bring to any considerable degree of perfection? And where would be the propriety or the economy of undertaking a work of this kind, when, by a little extra expense at the commencement, we may find the work already done to our hands?

Many farmers in this part of the country, though depending principally for their income upon their milch cows, are not aware, it is apprehended, of the small produce derived from them; and would, no doubt, be surprised on learning that their cows generally do not yield an average daily produce of more than from two to four quarts of milk for the year.

The average price of milk for the year, when drawn from the cow, will not exceed three cents per quart, either for the purposes of manufacturing into butter or cheese, or to sell in the market.<sup>†</sup> Let the farmer set off the expense of keeping against his six or twelve cents a day income from his several cows, and he will see but a small chance of acquiring wealth from the income of his dairy. But let him have a stock that, with the same keeping, will yield a daily average produce of six or eight quarts of milk, and he will find the produce of

\* Enough of them, if they can be *assured* of remunerating prices, but not if there should prevail a general apprehension that, when such stock is needed, either individuals or societies will continue to send abroad to procure them.

[Ed. Farm. Lib.]

† In New-York, and the neighborhood, the price varies. Milk is brought more than a hundred miles by steam; some sell on their farms, in the vicinity, for 2½ cents a quart—but they sell honest milk from the cow, before the pail goes to the pump. Others prefer to take or send their milk to town, and there the price varies in a remarkable manner. Those who sell to the hotels in large quantities, and to few customers, are content to get 4 cents, while others, who are known to sell the genuine article, have their old established customers, from whom they get 6½ cents a quart.

One farmer—a most industrious, practical, economical, and exemplary man—Mr. TOWNSEND, senior, from a farm of 130 acres, sells, for one item, \$1,200 of milk.

In the country around Philadelphia the farmers are getting in the way of retaining their milk, and converting their cream into *ice cream*, which they send and sell, in large quantities, in the common market, and find it very profitable. We are not aware that this practice prevails, or to what extent, with farmers in the neighborhood of other cities. The price, we believe, of genuine ice cream is rarely less than 50 cents a quart.

There are so many devices, "by hook or by crook," to get the farmer's money out of his pocket, that it is well if he can sometimes hit upon some experiment that will bring him more directly in contact with the consumer, and so save the commissions to the go-between, which are always taken finally out of the first producer, as is found when the transaction is sifted to the bottom.

[Ed. Farm. Lib.]



his dairy, which before gave him hardly enough to pay for the feed of his cows, now affording him a net profit, which will more than meet the extra expense which he may incur in the purchase of his improved breed of cows.

It may be said that the expense of keeping the improved breed will be greater than that of the native cows. This may or may not be the case. But the question with the farmer should not be, which will require the most food? but rather, which will give the greatest net profit on what they consume? It is the greatest capacity which the animal possesses of converting her food to milk, which ought, in the estimation of the judicious farmer, to constitute her relative value.

It was with a view of introducing among our farmers a dairy stock that should, with proper care and management, remunerate, and more than remunerate, the expense of keeping, that the Trustees were induced to appropriate so considerable a sum to this object.

What they have now done forms but a nucleus or starting point, from which, with the aid and countenance of a liberal public, they hope in due time to diffuse among the farmers of Massachusetts, not only an improved race of animals, but also an ambition to excel in everything that relates to this important branch of rural economy.

The breeds of cattle which the Trustees believed, under all the circumstances, to be best adapted to this country, best calculated to promote the object they had in view, and to subserve the wishes and wants of the farmer, were the Ayrshire and North Devon.\*

The Ayrshire cows have been, for nearly or quite a century, distinguished as deep milkers, and at the same time are known to be a hardy, mild-tempered, and docile race, easily kept, with a disposition to fatten when not in milk, and having a capacity of converting their food to milk beyond that possessed by any other breed of cows in Great Britain.

The venerable Aiton, who may be justly styled the pioneer and champion of improved husbandry in Scotland, and particularly of that branch which relates to dairy stock, says: "The Ayrshires are the most improved breed of cattle to be found in the island, not only for the dairy, in which they have no parallel, under similar circumstances, but also in feeding for the shambles. They are, in fact, a breed of cows that have, by judicious selection, cross coupling, feeding and treatment, for a long series of years, been brought to a state of perfection which fits them, above all others yet known, to answer in almost every diversity of situation where grain and grass can be raised to feed them, for the purposes of the dairy, or for fattening them for beef."

In the dairy establishment of Mr. Harley, at Glasgow, consisting of 150 cows, they were principally of the Ayrshire breed, to which he gave a decided preference over any other breed. The average quantity of milk given by the cows in his establishment, for the year, was eleven quarts per day from each.

In the famous dairy establishment kept by Mr. Rhodes, near London, of 400 to 600 cows, "he had tried the Ayrshires, to the number of 150 at a time, and by him they were highly approved—affording a large quantity of rich milk—fattening in a very short time, when they left off giving milk—and producing beef which was more highly valued, and sold for a higher price in the market than that of the Short-Horns."

Aiton asserts that many of the Ayrshire cows, in their best condition, and well fed, will yield at the rate of 1000 gallons of milk in a year, or over ten quarts per day. Rankin, however, states his opinion that Aiton had given the daily average produce too high, and thinks that few herds of twenty cows or over will average more than eight hundred and fifty gallons, or about nine quarts per day. He also states that he had seen thirty-six quarts of milk drawn from a cow in one day, and that he had a three-year old quay that once for six weeks after calving gave twenty-eight quarts per day. The dairymaid predicted that "there had been o'er-muckle talk about her for only luck to come of her," and he states that she soon afterward received an injury which caused one of her quarters to become dry of milk.

The characteristic points of the Ayrshire cow, when Aiton wrote, were: "Head small, but rather long and tapering at the muzzle; the eye small, but smart and lively; horns small, clear and crooked, and the roots at considerable distance from each other; neck long and slender, tapering toward the head, and no loose skin below; shoulders thin; fore-quarters light; hind-quarters large; back straight; broad behind; joints rather loose and open; carcass deep, and pelvis capacious and wide over the hips, with round, fleshy buttocks; tail long and small; udder capacious, broad and square, stretching forward, and neither fleshy, low hung, nor coarse; the milk-veins large and prominent, teats short, and all pointing outward; skin thin and loose; hair soft and woolly."

\* Which, as we have elsewhere said, might be had as pure, as large, as well-formed, and as beautiful, of Mr. George Patterson, in Maryland; of Mr. Allen, as we suppose, near Buffalo; in Connecticut, of the Hurlbuts; and elsewhere in the United States, as in England, or the world besides.

We happen to know of a North Devon bull, bred by Mr. Patterson, which has taken several premiums, never failing in any case when exhibited—3 years old last winter, and equal in blood and appearance to any, probably, in England—perfectly gentle and home-staying—that may be had, near Washington, for \$100.

[Ed. Farm. Lib

This is an accurate description of the Ayrshire stock imported some seven or eight years ago by the State Agricultural Society. The improved Ayrshire stock of the present day, which are descended from the famous *Swinley* stock, and of which the recent importation by the Society consists, differ in some respects from those above described by Aiton. The head is shorter, wider between the eyes and horns, thinner in the fore-quarter; the shoulders finer and more closely set; the limbs and body shorter, and the joints more closely and firmly set; the abdomen deeper and more capacious; the udder broader, the milk-veins more prominent, and the teats hanging directly down; hair longer, though more silky, and finer in the handling; and are altogether a hardier race of animals than the Ayrshires of former days.

"The color," says Robertson, "is generally a brown of many hues, from dark to yellow, intermixed and mottled in many a varied form and proportion with white; almost none are of one color. In a herd of forty or fifty, there will no two of them be alike in color—in this respect exhibiting a diversity not unlike a bed of tulips, and of as many hues and shades, in an endless variety of beauty."

The North Devon stock has long been celebrated as a breed of cattle beautiful in the highest degree. For the dairy, they cannot be considered equal to the Ayrshire; but, viewing them as uniting the three qualities of working, fattening, and milking, they may be considered as unrivaled. Some of the writers upon English stock give them a high rank as milkers, and Mr. Conyers, of Capt Hill, near Epping, a district almost exclusively devoted to the purposes of the dairy, preferred the North Devons, "on account of their large produce, whether in milk, butter, or by suckling."

"The North Devon oxen," says an English writer, "are unrivaled at the plow. They have a quickness of motion which no other breed can equal, and which very few horses exceed. They have also a docility and goodness of temper, and also a stoutness and honesty at work, to which many teams of horses cannot pretend."

Such is the character given of the breeds of cattle (a bull and four cows of each) which the Society have imported with a view of improving the stock of the country; and in order that there should be no mistake or disappointment as to the character of the respective breeds for purity of blood, and with a view of obtaining the best animals upon the most reasonable terms, the Trustees decided on sending out an agent for the purpose of making the selection. And accordingly, Mr. Alexander Bickett, of Lowell, a gentleman of intelligence, and an excellent judge of cattle, who had resided for some years in Scotland, and personally known and highly respected by most of the owners of distinguished herds of cows in and about Ayrshire, was engaged in July last to proceed to England and make the purchase. Mr. Bickett had, within a few years past, attended some of the cattle shows in Scotland—had noticed the best stock, and knew where he could place his hand upon the best cattle in the country.—The acquaintance of Mr. Bickett with the respective owners enabled him to treat with them upon terms much more favorable to the Society than could have been done by a stranger.—The four Ayrshire cows and the Ayrshire bull, selected by him, are probably equal, if not superior, to any other five cattle that could be purchased in Scotland. They are all descended from the purest and best blood of the Ayrshire stock, as will be seen by the pedigree given of them.

In the selection of the North Devon stock, Mr. Bickett applied directly to the Earl of Leicester, from whose beautiful herd of North Devon cows he hoped to be allowed to make the purchase. When it was made known to the young Earl that the stock was wanted for the Massachusetts Society for Promoting Agriculture, he generously and very readily fell in with the views of Mr. Bickett; and, possessing all the kind feelings of his father, the late venerable Earl of Leicester, toward the people of this country, he allowed Mr. B. to select from his flock, at a very moderate price, a cow and three beautiful heifers, all in calf by one of the most celebrated North Devon bulls in the country. The Earl having no bull that he could part with, he recommended a young bull of Mr. Blomfield, which Mr. Bickett succeeded, after much importunity, in purchasing.

The cattle were all shipped at Liverpool, about the first of September last, and arrived in Boston about the first of October. They were attended on the voyage by Mr. Bickett, and with so much care and fidelity on his part that no injury happened to them, and they were in as fine condition when landed in Boston as when put on board the ship at Liverpool. The North Devon cow calved on the passage from Europe, and the three North Devon heifers have calved since their arrival—the four calves furnishing a fine specimen of this beautiful stock.

The appearance of the cattle on their arrival in Boston was very gratifying to the Trustees and all who saw them, and such as was highly creditable to the skill of Mr. Bickett, and to his indefatigable care and attention to them while on shipboard.

The cattle, on their arrival, were placed under the care of the subscriber, at his farm in Lexington, where the public are respectfully invited to call and view them.\*

\* Obligated to be economical of our space, we are compelled to omit the *pedigrees* of these imported cattle—which, if copied as they appear in this Report, would have occupied several pages. This, however, is the less important, as the owners of their progeny will hardly have occasion to trace them up beyond their imported progenitors.

From the Albany Cultivator.

## FARM ACCOUNTS.

*Mr. Editor:* I observed in your January number, a form for keeping farm accounts, presented by E. V. W. Dox. Allow me to present one which I have used for the last two years, and which I find very simple and convenient. My system in regard to naming the lots is similar to that of Mr. Dox, only I prefer letters for this purpose, and use figures to designate the subdivisions, for it is found very convenient to divide each lot into two, three, or four smaller parts, in order that a separate account may be kept of each sort of grain. The complete account of these subdivisions may afterward be so arranged as to exhibit the account of the lot which they comprise. On the first page of the book should be an accurate map of the farm, with the title of each division and subdivision, and the number of acres in each. But, for the form:

MAY.	Man's Work.	Horse's Work.	Weather.	Remarks.
5	$\frac{1}{2}$ d. plow B. 1; 1 d. cart manure D. 3; $\frac{1}{2}$ d. repair fence	(1st) $\frac{1}{2}$ d. plow (2d) 1 draw 12 l'ds ma.	Pleasant—S. wind.	Commence draw manure; turned cows into past. A.
6	$\frac{1}{2}$ d. plow B. 1; 1 d. cart manure	" 1 d. draw 15 loads manure	Fair—warm.	B. 1 plowed, 3 $\frac{1}{2}$ days; apple blossoms appear.
7	1 d. cart manure, $\frac{1}{2}$ d. spread manure, $\frac{1}{2}$ d. plow D. 3...	(1st) $\frac{1}{2}$ d. plow (2d) 1 d. cart 14 l'ds ma	Fair—warm.	Com'nce plw D. 3; very dry; man'r'e'rid, 41 l'ds on 2 ac.
8	1 d. plow D. 3; $\frac{1}{2}$ d. spread manure; 1 d. harrow D. 3.	" 1 d. harrow. (1st) 1 d. plow	Cloudy and warm.	D. 3 plowed 1 $\frac{1}{2}$ days. " harrowed 1 day.
9	2 $\frac{1}{2}$ d. plant corn D. 3		Pleasant	Commence plant corn.
10	1 d. plant corn; 1 d. harrow B. 1; $\frac{1}{2}$ d. sow B. 1.	(2d) 1 d. harrow	Cloudy and cool.	Sowed B. 1—8 $\frac{1}{2}$ bush. oats. Corn planted, 5 $\frac{1}{2}$ d; $\frac{1}{2}$ b. seed.
11	2 d. plant corn		Very warm	W. $\frac{1}{2}$ ac. s'd steep'd in s ltptr

This account should occupy two pages of a common quarto or folio book, and for convenience, these pages should be opposite one another, so that they may both be open to the view at once. The weather column and column of remarks will thus fall on the right hand page.

In the column of horses' work you see I designate my teams as 1st and 2d. The farmer by practice will find that he may use many abbreviations which will facilitate the making of his daily entries. In this form are no names to be written every day, as in Mr. Dox's form, but merely an entry is to be made in the column of "Man's Work," of the time and

There is no herd-book in England, we believe, except of the improved Short-Horn cattle. The wide extent of our country, and the carelessness of our breeders, will render it difficult, if not impracticable, to keep a reliable one in the United States—though a very promising commencement has been made by Mr. L. F. ALLEN, of Buffalo, in his AMERICAN HERD-BOOK, which shall receive, as it deserves, a more particular notice. The undertaking could not have fallen into better hands.

As one instance of the difficulty of getting and keeping up a complete list, we have looked but for a single cow—an imported short-horn, that has given 38 quarts at a milking—SOPHY, property of George Law, Esq. of Baltimore. We do not find her on the list, though the search was a hasty one.

The owners of the descendants of this imported stock, at Boston, will have to trace them up to the Ayrshire bull, "PRINCE ALBERT," and to the Ayrshire cows, FLORA McDONALD, and JEANNIE DEANS, and MIRLEY, and CHARLOTTE. No name, that we can see, is given to the Devon bull. He was got by "QUARTLY." The Devon cows and heifers are—"Cypriis," by Spencer, dam by Denny, g. dam by Sampson, and served by Derby, in January, 1845; "Honeymoon," by Quartly, dam by Denny, g. dam by Sampson, served by Derby, April, 1845; "Stella," by Quartly, dam by Denny, g. dam by Sentinel, put to the bull, Derby, in January, 1845; "Jasper," by Quartly, dam by Denny, g. dam by Sentinel, put to the bull, Derby, in January, 1845.

It will thus be seen that all were in calf by the same bull; and that if they rely on the imported bull, hereafter, to breed from, he was got by the sire, and is, therefore, half brother to Honeymoon, Stella, and Jasper. If any one interested in this stock, however, should express a wish to have the fuller statement as to these animals, registered in this work, they shall be gratified. In the mean time, the Society and the community may be congratulated that these fine cattle should have been favored with the care and management of one so widely known for enterprise, skill, and *con amore* attention to such matters, as is E. PHINNEY.

[Ed. Farm. Lib.]



labor. If you have a boy in your employ, you may readily reduce his labor to man's work, and enter it in the same column.

The column of "Horse's Work" is quite essential. By this you may not only know the kind of labor your horses perform each day in the year, and the number of days they are employed, but having kept an accurate account of their expenses, you may readily calculate what each day's labor has cost you, and consequently know how much each grain account is debtor for their work. Few farmers, I apprehend, have a correct idea of the cost of horses' labor, and yet a farm account must necessarily be quite imperfect without such knowledge.

Next is the weather column. The weather has so much influence on the growth and product of the farmer's grain, that he cannot help feeling a lively interest in keeping this column, especially as it costs him so little extra labor. He has, moreover, the means of knowing what was the weather at any particular season, or any day of the year, and by a comparison of the weather column of "Remarks"—for in this last he should note how the crops thrive—he may learn the exact effect of almost every change of weather on the plants at those particular stages of their growth, and thus he will learn more thoroughly the physiology of plants, and will be enabled, perhaps, in some respects, to profit by the knowledge thus obtained.

The last column is for "remarks on the state of the crops," &c., and it may be used to make memoranda of various events connected with farm operations, which would otherwise be forgotten.

Once a year the farmer should post into another book, or perhaps on the last pages of the book posted, a complete Dr. and Cr. of each crop, a Dr. and Cr. of "stock account," (including new buildings, &c.) a "fuel account," "horse account," &c. &c. In short, a farmer should ascertain by his books whence comes his profit and whence his loss, and learn, from the same, to increase the former and avoid the latter.

Yours, &c.

Covasselon Springs, Smithfield, March, 1846.

G. DE WITT ELWOOD.

## THE SORT OF SHEEP FOR OUR MOUNTAINS.

ASHVILLE, N. C. 7th August. 1846.

*My Dear Sir:* I this day received THE FARMERS' LIBRARY, and proceed to answer the inquiry, about sheep, made by your correspondent. I consider the ridge of mountains running through Virginia and North Carolina particularly well suited for sheep husbandry, and the principal obstruction to its being carried on profitably is the want of fencing. The elevation is in no part too great for the Cheviot sheep, which in my opinion are better suited than any other; they are active and hardy, requiring less care and attention, and they will endure more hardship and feed themselves in snow by scraping it away with their feet, and thereby feeding themselves where the more tenderly brought-up sheep would perish. Even on the top of the Black Mountain, in summer, the sheep feed well and thrive; and I know no ground better fitted for feeding sheep than the Bald Mountain in this State.

As to fencing, I have agreed for putting up 12,500 rails at 6½ cents per panel of 10 rails, and can get any number put up at that price, and for which they are well paid—only it requires them to cut the rails as near as possible to the line of fence. Otherwise the hauling has to be added [at their expense, we presume the writer means]. Until the ground is fenced in, it is, in my opinion, quite useless to attempt feeding sheep; twenty shepherds could not attend to 600 sheep on the mountains; unless fenced in they will wander off and never return; and among under-brush who could watch them? Once fenced in, and part of the ground cleared for giving some food for winter—as hay, or rowen, which I consider better still, with some rape, which I prefer to turnips, as easier cultivated, a better crop, and a hardier vegetable, and one which sheep are fond of and thrive well on—I see nothing to prevent any person, with tolerable care and attention, from feeding sheep. I apprehend little danger from wolves—much more from dogs; but either can be disposed of with some strychnia, and which I would have no hesitation in using, if annoyed by either. I have been told if I did so the whole country would be up in arms on account of having their dogs destroyed; but I see no reason in any man keeping dogs to injure his neighbors' sheep or property. I consider this range of mountains far preferable to the prairies of

the west, particularly for winter feeding. You are aware that I did not succeed in my first attempt at sheep feeding; but that I consider owing to the grossest neglect in my absence in Pennsylvania. But what sheep I have now are doing almost as well as I could wish, requiring little care. I consider that sheep should yield 3 lbs. of wool each, worth 20 cents per lb. and each ewe a lamb worth half a dollar; so that each ewe would, all things considered, yield a dollar yearly. Wethers or wedders would produce as much, from the additional wool they will produce and the increase in value for mutton; they can be driven a great way to market, at a small expense, to the eastern cities, and where I believe any quantity could be profitably disposed of. I intend increasing my present stock, as I find I can do it with advantage, having the ground fixed to answer it, and I feel satisfied that for the capital embarked and the care required, nothing would pay better. I think you will admit I have put down the quantity of wool and price at a low figure. I think, all things considered, if a person was once well fixed, sheep could be fed in this district at a quarter of a dollar a head, all expenses included—not certainly if they get over-high priced shepherds, put up handsome and expensive sheep-houses and one hundred other things they don't require in this country. In Scotland, where the snows are deep in winter, and lie for a long time, it is rarely they lose their sheep—I mean the Cheviots; they are a hardy, thrifty animal, and could live the winter through here, five years out of six, except the flocks were very large and the bounds small, with little or no winter food, such as turnips or hay—with both they would no doubt be better.

I think I have given all the information requisite. There is another thing to be guarded against: that is, choosing a laurel district; for in winter when the ground is covered with snow, and also the lambs are subject to eat of it, and although there are many effectual remedies, if applied in time, the chance is, they will not be discovered in time to save their lives. Folding at night I consider unnecessary and rather injurious than otherwise. If there is any farther information I can give you, it will give me pleasure. If your friend wishes to import Cheviots, I can put him in the way of doing it safely—I mean without his running the risk of his being taken in. I would recommend the importation of a few bucks and half a score of ewes, and crossing the native ewes with the Cheviot bucks. From all I have observed, the last winter has been the severest there has been here for twenty years, and from all the information I could collect, I feel no doubt in my mind, that very little winter food is necessary here for sheep in general. They suppose here they can do in winter, like the bears, without food, from all they provide for them, as far as I have observed.

Believe me yours, truly,

W. MURDOCK.

We apprehend that our friend has allowed rather a high price for Cheviot wool. A person embarking in the business would probably do well not to count on more than 15 cents, one year with another. Col. Hampton, of South Carolina, has a flock of about 700, which are *never fed*, and he kills as fine mutton as ever graced the table of a Lord Mayor.

[*Ed. Farm. Lib.*]

**INDIAN CORN IN IRELAND.**—The Dublin correspondent of the Morning Chronicle says: "The use of Indian meal has now become quite general throughout the country, and the people prefer it to the potato, the enormous price of which, for some months past, had placed it beyond the reach of the laboring classes. One good effect of this change in the food of the humbler classes is a reduction in the price of potatoes, both for seed and for immediate consumption."

As Indian corn, says Hayden, has lately been imported largely into Ireland, it may not be uninteresting to give the following a place here:

"THE NUTRITIVE PROPERTIES OF INDIAN CORN COMPARED WITH THOSE OF THE POTATO. Proportion of nutrition in 100 parts of potatoes, 24; proportion of do. in Indian corn, 88 proportion of water in 100 parts of potatoes, 72; proportion in do. of Indian corn, 9."

**CULTURE OF THE ENGLISH WALNUT.**—Mr. WM. JENISON, of Cambridge, Mass. thinks the culture of the English walnut would be a lucrative business for the farmers of Pennsylvania, Maryland and Virginia. He states that he has known a single tree to produce 24 bushels in a season.

[Albany Cultivator.]

## TABLE FRUIT.

## FILBERTS.

Is there any good reason why this excellent nut, so welcome as a part of every dessert, should not be added to the list of our domestic productions? In Kent, England, there are extensive and profitable *orchards of filbert-trees*—the cultivation of the tree being there well understood. This consists much in proper *pruning*. The filbert, says a writer in the Journal of the Agricultural Society of Scotland, is but an *improved hazel*—the latter being the wild original to the former, as the crab to our improved apples. The filbert being an accidental variety, produced by cultivation, cannot be certainly propagated or reproduced by sowing the nut—that is the seeds; for not one in ten of the plants raised from seed would prove filberts, but common hazel-nuts only. To insure the true variety, says the same writer, the young trees should be raised from *layers*, and these, after being rowed out in nursery order for two or three years, in which time they are trained to one upright shoot of not less than three feet high, all suckers and branches on the lower part of the stem being constantly removed.—The trees, says the same writer, after being planted in their final stations, are headed down to about eighteen inches from the ground. This hight will admit of a clear stem of about 12 inches below, and which part must be ever afterward kept clear from shoots. This removal of shoots and suckers will cause the buds at top to shoot with greater vigor. If, according to the directions of this writer, eight strong shoots be produced in the first summer, they must be carefully preserved, as that number will be required to form the head; but if less than this number come forth, then two or three of the strongest must be shortened back to half their length at the next pruning, in order to obtain the requisite number.

A sufficient number of branches being obtained, if not in the first, certainly after the second pruning, they are to be carefully preserved and trained outward and upward into the due position, to form the permanent branches. In England, the branches are allowed to rise to the hight of four feet—never higher; and the middle of the tree, or rather bush, is always kept free from shoots—so that a well-trained head resembles a large bowl.

It is added that the easiest mode to give the tree this shape is by using a hoop of the proper size, placed within the shoots, and to which the limbs are tied at equal twelve-inch distances, in divergent order; and this may serve as a practical hint for giving that or other form, where it may be desirable, to other trees or bushes, either useful or ornamental. Such lateral and curving position may be assisted by a careful pruner always cutting at an outside bud, which, when prolonged, first outward, naturally turns upward into the due position to form permanent branches. In our country, however, it would be sufficient to restrain the tendency of these *stoling* plants (so called from their tendency to increase themselves by numerous suckers from the roots) to run into too much wood, by depriving them of their suckers, and thus induce a stronger expansion (as is done with other fruit-trees) of the fructiferous branches.

We are not aware of the grocery-store prices of filberts.

Being visited at the instant of writing thus far by a bevy of ladies, to go and walk over the classic grounds about old Fort *Ticonderoga*, we begged to be ex-



cused on the ground of having indulged there in solitary meditation before breakfast; but would accompany them on condition that any one of them (some being first-rate house-keepers, as we knew, if one might judge by the cleanliness of their establishments and the luxuries of their tables) could tell the *prices they were giving at home for filberts!* when, *mirabile dictu*, they "did not know, but *thought* it was a quarter and a fippenny bit a pound!" So we got off, and will proceed only to say that it is not in this, and in many cases like it, that we would inculcate home cultivation, merely or even in great part only for *profit*; but to cultivate and gratify that taste for fruit culture, and arboriculture generally, which every right-minded farmer should cherish in himself and his family.

#### HICKORY-NUTS, BLACKBERRIES, &c.

Is any sentiment more natural or worthy of encouragement than the pride which every gentleman agriculturist may be supposed to feel in having it in his power to say to his guests that the most luscious fruits and the choicest nuts on his table—the grape, the apricot, the pear, the melon, the peach, the almond, the filbert, and the hickory-nut—are from trees of his own rearing, improved by his personal care and his skill? We have before remarked on the wonderful congeniality of the north side of Long Island to the *growth of trees*. In the orchard of Judge Mitchill at Plandome, are the most thrifty and vigorous *hickory-nut trees* we have ever seen, from nuts which he brought some years since from Pennsylvania; and if we are not deceived by a very bad memory, they are beginning to bear in twelve years from the nut. Such is the effect of transplantation and regular culture, in a friendly soil. For taste and skill of this sort, so indicative of fine feeling and a character above the common order, few were so much distinguished as the late General T. M. FORMAN, of Rose Hill, on the beautiful shores of the Sassafra River, in Maryland.

We have somewhere a memorandum or list of the *great variety* of trees growing, in the finest health, at Roswell House, residence of R. L. COLT, Esq. at Paterson, New-Jersey. We shall publish it some day for the sake of those, of whom we hope the number is fast increasing, who may be disposed to surround their dwellings with as great variety as possible of the beautiful and innocent inhabitants of our forests, with forms of every shape, and habiliments of every hue. A friend at our elbow suggests that in New-Hampshire he has known the common hazel-nut to be in fields or gardens where it was *exposed* to chance cultivation, and that the nut was much enlarged, while its native flavor, altogether superior to the filbert, was retained.

It were much to be desired, if any stimulus should be wanting in a case which should require none, that our horticultural societies should offer medals or premiums in some form, for the best specimens of *cultivated filberts and hickory and other nuts*, and especially for the best *blackberries*; for sure we are that in not many years of perseverance in a course of improvement, that berry would take a high stand among our table fruits, as its known sanitary qualities have given it a rank among the most efficient and agreeable medicines. For the exercise of skill and horticultural taste, few things offer a better subject for experiment, or one more promising, than the *blackberry*, beginning with the largest, the sweetest, and the kind most exempt from seed; for the wild variety is already as great as that of our native grapes, and who knows but that in a shorter time a more interesting result may be realized? In some parts of the country it may not be too late to preserve the seed of the best; and from seedlings who knows what new varieties may not come? How wide is the field! how unlimit-

ed the variety of objects on which *the man of the country* whose dealing is with the soil, and whose business is with Nature, may beguile his time, while he *benefits*, instead of slaughters, his fellow-creatures! diffusing blessings instead of spreading misery around him!

*Ticonderoga, Lake Champlain, 8th Aug. 1846.*

## THE STRAWBERRY.

### MANAGEMENT WITH A VIEW TO ITS IMPROVEMENT.

WITHIN a short period the cultivation of various kinds of fruits has been crowned with success. The apple, pear and peach have each greatly improved; but the strawberry, one of the most fragrant and delicious of fruits, has been surprisingly neglected, owing, perhaps, to the impression of its not being capable of melioration. Now, I have ascertained by actual experiment that it is susceptible of a high degree of improvement, which fact can be verified by carrying out the plan detailed below.

It will be necessary in the first place to procure the following implements: a small hand-fork with four prongs or teeth, similar in length and shape to those of the common carving-fork; a long-handled fork like the dung-fork in use formerly, the teeth 4 or 5 in number, flat,  $\frac{3}{4}$  of an inch broad, and 12 or 14 inches long; to which I shall add another of great value, in this dry climate, to those who cultivate on a large scale, whether agriculturists or horticulturists: it is a cultivator with 4 or 5 teeth, 18 or 20 inches long,  $2\frac{1}{2}$  inches wide,  $\frac{3}{4}$  of an inch thick in front, tapering back to  $\frac{1}{2}$  an inch, set in somewhat like a coulter, but the thick edge foremost, the point triangular, spreading about 3 inches. The proper use of it in dry seasons will secure a good crop of potatoes where they have not been ridged up; in the kitchen garden it is invaluable, and a great labor-saving machine; by removing two or three teeth it may be passed through narrow rows, close to the plants, and when properly applied will break up and open the soil to the depth of 12 or 14 inches.

The prominent points of the system now proposed are few and simple, viz.: choice of soil and preparation for planting; selection of the best fruit-bearing plants, and method of treatment, especially with a view to the steady improvement of the fruit from season to season.

A light soil is best; what is termed a sandy loam is preferable to any other.

In the early part of September, the weeds, &c. having been removed, plow or spade the earth deeply, harrow or rake thoroughly until *entirely cleared of roots of grass, clover, &c.* About the middle of the month avail yourself of the first appearance of rain to set out your plants. In selecting these, the FIRST OFFSETS only from the strongest old plants are to be taken; all the rest must be rejected, producing only imperfect fruit, or being wholly abortive. Having with a pair of scissors, or sharp knife, separated the set from the runner and the parent plant, remove it carefully by inserting the small fork beneath, taking up a portion of the earth with the roots. Place each separately on a hand-barrow, board or flat-bottomed basket, to be carried to the planting-ground. The rows should be  $2\frac{1}{2}$  to 3 feet wide, and the sets must be planted in a straight line from 15 to 18 inches asunder, in holes scooped out of sufficient size to receive the sets as taken up; bring sufficient earth and press it well to the roots.

By this mode of treatment the plants will grow to a great size, and require more space than usual; in truth, it is impossible to keep them clear from grass and weeds when crowded together. There will also be more room for the free use of the cultivator, hoes and rakes.

Toward the last of November run your cultivator between the rows, or fork up the earth, especially about the plants, dressing it neatly with the rake, being careful to eradicate every spear of grass or weeds. Lay as much *tan* as will cover a space of about 10 or 12 inches diameter and one inch in depth around each set, bringing it close up to the plant; it will defend the roots from the frost and prevent the growth of grass and weeds. As soon as the weather and state of the ground will permit in the spring, fork in the *tan* 8 or 10 inches deep; one

or two rows may be left with the tan on the surface, to secure a supply of fruit in the event of a very dry and hot season.

When your fruit begins to show signs of ripening, cover the earth about it with cut straw, in manner similar to the tan; it will defend it from the dirt and sand, accelerate the ripening and improve the flavor.

We have now arrived at an important point, for the next step is of more consequence, perhaps, than any other, and entire success cannot be attained without taking it aright. As soon as you perceive the fruit has arrived at maturity, place slips of wood 3 or 4 inches in length beside those plants bearing the largest and most perfectly formed, for it is from *these only* you are hereafter to select your plants.

When the bearing season is over, proceed at once to clear up the bed, trim away the dead and dying leaves, and pull up carefully all intruding weeds and grass. Plow with the cultivator, or fork up the earth, especially about the plants, without killing. Soon after they will put out runners, and when the first offsets have taken root, clip off with scissors the runner, but leave the connecting link with the parent entire of all those with marks attached. The runners of all the others must be clipped off occasionally in order to strengthen the plants.

Toward the latter part of November, or before the earth is frozen, repeat the same process before recommended, and during the ensuing season the same routine is to be followed as heretofore detailed.

The sets of this season's growth being taken from improved fruit-bearing plants, will give the first decisive evidence of the general improvement of the fruit in size, flavor, &c. In fact, it is similar in principle to that practiced in rearing cattle, breeding only from improved stocks.

In our climate irrigation may be resorted to with great effect; with plenty of water you can be sure of a great crop of superior fruit. E. T.

The *rationale* of the above is apparent, and we have but little to say in the way of comment or commendation. The much esteemed writer has chosen to be anonymous, and we have only ventured to append his initials; otherwise there would have been no occasion for us to add, that within the wide range of his acquaintance he is well known to be one of the most zealous and skillful horticulturists in our country.

Very much has been done by a few—yet very few—to improve this delightful fruit; but the difficulty consists in the want of that *personal and persevering attention* to such things on the part of the gentlemen of the country, which it will be impossible to beget, with any thing like universal or even general prevalence, until an improved public taste for all such elegant and useful employments shall have been produced by *improved education*.

When more lasting fame and higher rewards shall await such men as HOVEY, for producing a new and highly improved variety of a delicious fruit, than is awarded by the laws or by public opinion to the successful demagogue or the fortunate warrior, then will have been insured a progressive improvement in all the arts of civilization; then will domestic comfort and national prosperity follow in the wake of well-directed individual ambition and wise public legislation. The best managed and most promising strawberries we saw last spring were at *Millwood*, near Columbia, S. C. [Ed. Farm. Lib.]

## DISEASE IN POTATOES—A REMEDY SUGGESTED.

BALTIMORE, 29th July, 1846.

Dear Sir: You know I am not much of a farmer, and do not like to meddle with subjects I am unacquainted with; but this devastating potato rot has suggested to me an idea of its cause, which very probably may have occurred to you, as it is one which is natural, and may by being noticed in your journal set people at work to experiment, at least, on the subject.

It has occurred to me that as potatoes are indigenous to South America, or perhaps the central part of our Continent, and were first introduced into Europe 150 or 200 years ago, that so general a disease among them spread over Europe and



America, where they have been cultivated, may possibly be owing to the original vegetable having ceased to be soundly propagated, by the gradual decay of the power to produce it in the cuttings from the original plant, pretty much as we have seen our pear and peach trees fall off when grafted from original stocks. Perhaps if importations of the spontaneous article should be made, and by cultivation made what our former crops were, we might again have a generation of potatoes equal to any. It is worth examining into, and when we consider the mode of propagation by cutting out pieces with eyes from previous growths produced in the same way, it is not surprising that deterioration should follow. How otherwise can you account for so universal a destruction? I had a good crop at my country place near town. On Friday night we gathered some fine young potatoes; on Saturday we could not get one sound one, and had to dig up the whole. They had all been infected with the same disease. The cholera, supposed to be excited by a microscopic insect, is progressive, and runs its course from Asia to Europe and to America in due time; but if the potato disease is caused by a similar insect, it is rather extraordinary that it should make its appearance simultaneously all over the world.

The suggestions of the writer of the preceding are worthy of attention on every account. Though he disclaims all pretensions as a practical farmer, he is well enough read in the literature of all rural arts to know that it is by no means to practical men exclusively that we are indebted, either for the history or the improvement of fruits and vegetables.

We unaffectedly regret not having been left at liberty to give his name, because, besides other reasons, it is a part, and we trust he will believe no small part, of our reward, that our labors should attract the regards of cultivated men, and be by them considered, such as they are, as the growth of a venial ambition to raise the arts of Agriculture and Horticulture in public favor, and to cause them to be studied and followed as pursuits that eminently comport with high and various mental culture, while they conduce to the health of their votaries.

By gentlemen who have ships going to South America, no time should be lost in bringing home the natural potato. At the same time, we should entertain the hope of realizing the desideratum in this case as soon by planting the apple of the potato we have, with a view to the establishment of a new variety equal to the Mercer, or the Kidney, or the Foxite, out of the great number of inferior kinds to be thus obtained from the seed of any given variety. These are the cases to which agricultural and horticultural societies would do much better to apply their premiums than to the greatest quantity of this thing or that, the production of which requires but little skill and develops nothing new.

Mr. TESCHEMACHER, of Boston, we believe was the first to pronounce the opinion that the cause of this dreadful malady is a *fungus* belonging to the class of moulds, and the genus *Botrytis*; and in this he is sustained by the concurrent opinion of Professor MORREN of Liege, whose Essay may be found in the first volume of the MONTHLY JOURNAL OF AGRICULTURE, and seems to be regarded as one of the most authoritative papers which has appeared on this subject. As to the influence of variety—"Very early kinds," says the last-named writer, "have escaped and are fit to be preserved, for they were full grown before the fungus made its appearance."

As regards the raising of potatoes from seed, Professor M. remarks that "This is a matter of great importance and very advisable, provided the seed or apple be procured from foreign regions; and he urges that "The reason why potatoes equally long cultivated, but more recently introduced than others, have better been able to resist the disease, is the manifestation of a more energetic vital action; and this greater energy was a necessary consequence of the plant being transferred into another and better soil." This reasoning, we confess, appears to us to be anything but conclusive, unless it were shown that the soil of Germany is a "better," as well as "another" soil than that of England. "It is," says the writer before us, "farther a fact of experience that the seeds of a plant will be better able to produce varieties that will live and thrive in their new native country, the more distant the country of the parent plant is. Instances are taken from the dahlia, which has innumerable varieties in Europe, but none in Mexico, its natural country; of the camelia, which is nearly of uniform appearance in China and Japan, but of which numbers of varieties are raised in Eu-

rope." We proceed to give the residue of the remarks by P. F. FROMBERG, first assistant in the laboratory of the Agricultural Chemistry Association of Scotland, as they deserve attention independently of their bearing on the disease of the plant. His remarks on the influence of climate upon the qualities of the potato accord with experience in the United States. Elevated regions and cooler latitudes give us our best potatoes and our heaviest oats.

"In case, however, the process of raising potatoes from seed be tried, it is of prime importance to select a proper soil for cultivation, and also a sound and fertile fruit, duly prepared for propagation, by allowing only two or three in each bunch to reach maturity, and cutting off the rest. When intended for use, the seed should be taken out of the fruit, and well washed, keeping only those which sink in the water, farther dried in the sun on a piece of paper, during twenty-four hours, and preserved dry and safe from the attack of insects. To get very early kinds, the fruit or apples should be taken from the flowers that have raised their petals first.

"It is also proved by experience that the potato prefers a damp climate to a dry one, and grows better at a moderate than at a high temperature. Peru, where it grows in a wild state, produces no potatoes that are edible, and at the same time yield large returns; it is in the north of America that they increase so much in size and produce. In Ireland, of which the climate is damp, and the temperature moderate, and in Lancashire, the potato culture reaches a high state of perfection in every respect; but in Italy, Spain, and the South of France, and part of Germany, the produce is of inferior quality.

"For these and other reasons, it is advisable to pay particular attention to the raising of winter potatoes; they are said from experience to suffer much less from disease than those raised in summer. The potato, although it may be planted to a depth of three feet without danger, should, however, be sown less deep—half a foot, for instance.

"Reference is made to the experiments made by Mr. Goodillie of Granard; by Mr. Jackson in Manchester; to those of Mr. Williamson, made in the island of Bute and in Perthshire; and of Mr. Herry of Handsworth, to prove the advantage of raising early potatoes. Several growers in Germany and France have done the same with equal advantage.

"The practice followed in Lancashire, of planting only the rose-end, and keeping the opposite part for food, is considered the best of all. As the eyes of the rose-end produce their shoots about three weeks earlier than those of the heel-end, this method is well calculated to grow early varieties."

DARWIN, in his entertaining "Voyage of a Naturalist," published lately by the Harpers, gives the following account of this important vegetable as it was found on the island of Chonos, in the Pacific, on the coast of South America:

"The wild potato grows on these islands in *great abundance*, on the sandy, shelly soil, *near the sea beach*. The latest plant was nearly three feet in height. The tubers were generally small, but I found one of an oval shape two inches in diameter. They resembled in every respect, and had the same smell as English potatoes; but when boiled they shrunk much, and were watery and insipid, without any bitter taste. They are undoubtedly here indigenous; they grow as far south, according to Mr. Law, as lat. 50, and are called Aquinas by the wild Indians of that part; the Chilotan Indians have a different name for them. It is remarkable that the same plant should be found on the sterile mountains of Central Chili, where a drop of rain does not fall for more than six months, and within the damp forests of these southern islands."

In this improbability of the potato by cultivation we have another example of the design of Providence that man should be diligent and exercise both his mental and physical faculties for the melioration of all the gifts of Nature—for what fruit, flower, grass, grain, vegetable, or animal has not been variegated and made more beautiful and better, by domestication and artful appliances? And should not this reflection alone convince the most skeptical that Agriculture and Horticulture are in their very nature eminently intellectual pursuits?

Finally, everything goes to show the soundness of the suggestions of our correspondent that we should recur, under existing circumstances, to its native *habitat* for the original or parent stock of the potato, leaving it only a question whether it would be most conducive to the end in view to bring the plant itself, or the seed of the apple, with which to establish new varieties of youthful and more vigorous constitution; and yet, whether the product of these would be more exempt from the prevalent disease is, after all, but a problem—worthy of being solved by the experiment suggested, when we consider how easily it might be done, and how important is the object proposed.

[Ed. Farm. Lib.]

P. S. The following meets our eye at the moment; let it be tried, though not in the expectation that there will be "no diminution of the roots" if the tops are removed before they are ripe—else what is the use of the tops? Tops have been laid on our table which have every appearance of being killed by having their hearts eaten out by worms:

Mr. M. C. WEBSTER has addressed a letter to the Editors of the Hartford Courant. He says the tops of the potatoes should be mown off when they are about half or two-thirds grown. He has tried the experiment, and found it fully successful. He mowed off one-half a potato patch, and left the remainder as they were. Those left with the vines on were nearly all destroyed by the disease, while in that portion from which the vines were cut not a single diseased potato was found. It has been found, too, that cutting off the vines does not diminish the roots.

## NOTES OF A DESULTORY READER

## ON THE SWIMMING POWER OF HORSES.

ON the capacity of horses for swimming, men's ideas are very loose and various. Few who have never been in the western country would believe how very common it is there to *swim on horseback* over creeks and bayous. Such trifling impediments are not allowed to stand in the way of a hardy pioneer, who in some respects, and especially in the mastery and use of the horse, may be said to resemble the *Gaucha* of the South American pampas.

Traveling once in the western country, I expressed some fear of not being able, from the state of the roads and the absence of bridges over the water courses, to reach a certain place by a given time. "Oh!" said a friend, "nothing need be more certain. Take my horse and follow such a road; you will only have to *swim* the 'Big Black' and the 'Alligator Bayou,' and you may reach your destination before dark." On my appearing shocked at the necessity of swimming rivers and bayous, and protesting that I could not, myself, swim a foot, he very coolly answered, "Oh, never mind, *my* dear sir; my horse *swims* the driest of any horse you ever saw."

I remember hearing, when a boy, that a horse belonging to St. Mary's county in Maryland, had crossed the ferry of Patuxent at Benedict, and was turned loose in the rich pastures of "Battle Creek," the superb estate belonging to the father of Chief Justice Tane, in Calvert county. The next day the horse, on being searched for, was returned *non est*. It was finally ascertained that he swam the Patuxent, where it was at least a mile wide, to get home again; so true is it that with horses, even more than with some men, there is "no place like home!" Yet some moralists of the first water would degrade them and impeach the goodness of their Creator, by divesting all animals of every feeling of friendship and sociality, and all except the coarsest and most brutal passions and propensities of animal nature. Whereas every man of observation who has traveled by that most agreeable of all modes of traveling, on horseback with one or two good-natured, sociable and witty companions, must have perceived that the horses which fall in with each other on the road sometimes become acquainted sooner than their riders, and part company with more evident reluctance. *They* don't wait to be introduced to each other; indulge in no anti-social or sinister speculations as to each other's wealth and standing in society; lay no schemes to inveigle or overreach; and when, finally, they arrive at the place to be baited, no degree of hunger can prompt them to rush to their meals, with more evident apprehension of not getting their share, or with more impetuous and indecent haste than we witness with disgust on the part of modern fashionable travelers on "fashionable tours."

But as to the swimming power of the horse. Those who were cognizant of the fact of the horse swimming the Patuxent river, from Calvert to St. Mary's county, where it was a *mile wide*, were almost afraid to tell it, for fear of being doubted; yet, in a book before us, "DARWIN'S VOYAGE OF A NATURALIST," which the HARPERS have had the good taste and judgment to let us have so promptly, and which will be read with the liveliest interest by all who have a taste for natural history; this very entertaining and popular author says: "On a former



xcursion, I crossed the Lucia near its mouth, and I was surprised to observe how easily our horses, although not used to swim, passed over a width of near six hundred yards. On mentioning this at Montevideo, I was told that a vessel containing some mountebanks and their horses being wrecked in the La Plata, one horse swam *seven miles to the shore!* In the course of the day I was amused by the dexterity with which a Gaucho forced a restive horse to swim a river. He stripped off his clothes, and jumping on his back, rode into the water until it was out of its depth; then slipping off over the crupper, he caught hold of the tail, and as often as the horse attempted to turn round, the man frightened it back by splashing water in its face. As soon as the horse touched the bottom on the other side, the man pulled himself on, and was firmly seated, bridle in hand, before the horse gained the bank. A naked man, on a naked horse, is a fine spectacle; I had no idea how the two animals suited each other. The tail of a horse is a very useful appendage; I have passed a river in a boat with four people in it, which was ferried across in the same way as the Gaucho. If a man and horse have to cross a broad river, the best way is for the man to catch hold of the pommel or the mane, and help himself with the other arm."

So much for what a horse can do in the way of swimming when the crisis comes to "sink or swim."

History presents no example of the efficiency and usefulness of the *horse* to equal that which was realized by CORTEZ, among the greatest of warriors, as related by PRESCOTT, easily the first of American historians, and what is more, *an honest historian!* for about the most detestable of all swindlers is he who swindles on a point of history.

But the power of the few horses landed with Cortez on the shores of Mexico was truly magical, for it was much greater in a *moral* than in a *physical* sense.

The native Mexicans had never before seen or heard of such a beast; and under the impression that man and horse were but one animal, each being part and parcel of the other, they concluded it could be nothing less than the Devil incarnate, and did not wait, as did their descendants, for the charge of our gallant MAY, but fled by thousands at the approach of a single platoon of cavalry.

Do not all military annals abound in examples to show the overbearing effect of moral influences in war, and that every General should be, practically, a good metaphysician? If old "Rough and Ready" had possessed the means, at hand, to take full advantage of the running start he got at Palo Alto, and the panic his victory spread in the enemy's camp, he might then have overrun a good part of Mexico.

A FRIEND OF THE HORSE.

**MACHINERY**—SAVING EFFECTED BY IT IN GETTING OUT GRAIN, AS ASCERTAINED IN GERMANY.—Sowing-machines are only in use for rape, and occasionally for turnips. Where seed is abundant and labor cheap, the outlay for expensive machines is not repaid, as is the case where labor is dearer. This principle is farther confirmed by experiments that have been made with the Scotch threshing-machine as modified by M. Dombasle, in Alsace. For small quantities the advantage of machinery is scarcely apparent; but machinery applied to large quantities produces a great saving. Experiments made in Germany have shown that where—

		The produce in Wheat costs to thresh:	
		With the machine.	By hand.
If the production is	5,000 sheaves.....	93 florins.	135 florins.
"	10,000 ".....	116 "	270 "
"	20,000 ".....	163 "	541 "
"	40,000 ".....	265 "	1,082 "

Supposing the outlay for a threshing-machine, of 4-horse power, to be £70, it is reimbursed in one year in a farm producing 40,000 sheaves. A farm producing only 5,000 sheaves would not admit of sufficient saving to pay the interest on the investment.

## INDUSTRIAL RESOURCES OF CANADA.

SETTING out lately to visit Niagara Falls, for the first time, by the way of Buffalo, we were easily drawn by the Rapids, and other no less resistless influences,\* down to MONTREAL and QUEBEC.

Lundy's Lane, and the Heights of Queenstown, and the Plains of Abraham, and the old Forts Niagara, Ticonderoga, &c. all had their attractions of historical interest. No American could regard with indifference the very localities consecrated by the blood of such men as BROWN and SCOTT, where that rare occurrence in military annals took place—the *crossing of bayonets*, as at Lundy's Lane; and that, too, by men, as might be expected, of the *Saxon race*.

"When Greek meets Greek, then comes the tug of war."

Neither can any man of true sensibility, of whatever country, walk without emotion over the very spot where the young and gallant General WOLFE, expiring in the arms of victory, exclaimed, "Now, then, I die contented." Absorbed by the recollection of such signal events, hospitably entertained, and charmed by the splendid music and military movements of the famous Scotch Highlanders, at Montreal and Quebec, it may be supposed that little chance was afforded to notice the agricultural resources and products of the region so hastily traversed; yet in that respect the journey was by no means devoid of value, as we may endeavor, when more at leisure, to show our readers. For this we shall find justification in the resemblance between the climate and soil of the Canadas and of Western New-York and a large portion of Vermont.

The crops about Montreal, as well of grain as of grass, were to all appearance highly remunerating as to quantity, indicative of a fine soil to work upon; but the cultivation generally was not marked by extraordinary neatness, nor did it indicate an active and general spirit of improvement.

In such cases, as in many others, trifles "show which way the wind blows." Of these trifles, if so they may be termed, we might mention several of strong signification. The most inauspicious was the languishing condition or death of societies which had existed for the promotion of improvements in Agriculture.—Sad and unpromising is the moral condition of a great class of men, when, through despair or indifference, they abandon the hope of promoting their common welfare by communion of thought, the interchange of discovery, and by concert of exertion and influence for the protection of those interests which, when left unguarded, are sure to be assailed by rival or antagonist classes: and these remarks are as applicable, under like circumstances, to all other agricultural communities, as to that of the Canadas.

Let us advert to another symptom which, whatever others may think, had its force with us. In a bookstore at Montreal, we inquired if they had any agricultural works? hoping to pick up something new. The answer was, "they believed they had one,"—and then produced "A TREATISE ON THE THEORY AND PRACTICE OF AGRICULTURE, ADAPTED TO THE CULTIVATION AND ECONOMY OF THE ANIMAL AND VEGETABLE PRODUCTIONS OF AGRICULTURE IN CANADA." On asking

\* There were ladies in the case.

the price, we were told, "\$1 50—if it would sell for anything"! So we paid the demand, and behold! we found this little work of 300 pages—worth \$1 50, "if it would sell at all"—to be full of agricultural literature and practical information of a high cast, and such as ought to be in the library of every agriculturist in Canada who is not content to degrade his own profession—the very business of his life—by considering and following it as a mere drudgery—a work of routine—in the management and conduct of which it is only necessary that the man should be one degree raised above the brute he drives. For so every man entitles himself to be denounced who would divest Agriculture of that elegance and dignity which are only to be associated with intellectual exercise and the charms of literature.

To no such category does the author of this work belong. We had not time, after getting his book, to seek the favor of a personal acquaintance with its author, WILLIAM EVANS, "Secretary to the Montreal Agricultural Society,"—but it requires very little observation to pronounce that, if communities are not improved by the continued and enlightened labors of such Societies, it is never the fault of such Secretaries.

We had hoped to have found in this work some exact history of the origin and introduction of the *Canada Horse*. A slight examination of it, however, has not proved satisfactory in that respect. We noticed particularly, nevertheless, as we went along, the horses of the country, such as are literally "the horses of all work," in Montreal and Quebec; and, with the exception of a few in private carriages, procured from "the States," they are, *almost without exception*, of the frame and character of what is understood with us as the "Canadian Horse," viz. stout, close knit, and short jointed, with a rather large and (behind) crooked leg. The muzzle not particularly coarse, but the jowl thick, and head and neck large and heavy, with long mane, and uncommon width and flatness between the eyes; very few of them rising to 15 hands, but evidently very hardy, true to the draught, and exceedingly strong. Contrary to the impression which prevails, we are now satisfied that the specimens which have been brought to the United States do full justice to this breed of horses, which to us appear to be well adapted to the climate and labor of Canada. We agree on this point with Mr. Evans, that "the horse best calculated for agricultural purposes here, in summer and winter, is one of moderate size, strong, active, spirited, and of hardy constitution. Can any horse more nearly come up to this description than a good-sized, well-shaped Canadian horse?" We are, in fact, almost settled in an opinion we have elsewhere intimated, that Nature will take care to adapt animals, as well as vegetables, to the circumstances of the country; and though Art, when working in harmony with her, may do much to improve her productions, it must not too rudely cross and oppose her purposes.

In some conformity with our impressions on this subject, DARWIN, in his *Voyage of a Naturalist*, elsewhere referred to, remarks: "It is curious to observe how the *seeds of grass* and other plants seem to accommodate themselves, as if by an acquired habit, to the quantity of rain which falls on different parts of this coast;" and in "CONNECTION OF THE PHYSICAL SCIENCES," by MARY SOMERVILLE, lately published, from the seventh London edition, by the HARPERS, of New-York, we find—"It is even said that a distance of 25° of latitude occasions a total change, not only of vegetable productions, but of organized beings." So we are inclined to believe that if the high-bred south-eastern courser, or the coarse Conestoga wagon-horse, were turned loose in Canada, in process of time they



would accommodate themselves to the country, and take on the form and characteristics of the Canadian horse. But a truce to speculation. Let us give, from Mr. Evans's book, the

#### MEANS OF PROGNOSTICATING THE WEATHER.

By means of the barometer, we are enabled to regain, in some degree at least, that foreknowledge of the weather which the ancients did possess. Chaptal considers that the value of the barometer, as an indicator of the approaching weather, is greater than the human knowledge of the most experienced countryman, and indeed of all other means put together.

The rising of the mercury presages, in general, fair weather; and its falling, foul weather, as rain and snow, high winds and storms.

The sudden falling of the mercury foretells thunder, in very hot weather, especially if the wind is south. The rising in winter indicates frost; and in frosty weather, if the mercury falls three or four divisions, there will follow a thaw; but if it rises in a continued frost, snow may be expected.

When foul weather happens soon after the falling of the mercury, it will not be of long duration; nor are we to expect a continuance of fair weather, when it soon succeeds the rising of the quicksilver. If, in foul weather, the mercury rises considerably, and continues rising for three or four days before the foul weather is over, a continuance of fair weather may be expected to follow.

In fair weather, when the mercury falls much, and low, and continues falling two or three days before rain comes, much wet must be expected, and probably high winds.

The unsettled motion of the mercury indicates changeable weather.

Toward the end of March, or more generally in the beginning of April, the barometer sinks very low with bad weather, after which it seldom falls lower than 29 degrees 5 minutes, till the latter end of September or October, when the quicksilver falls again low with stormy wind, for then the winter constitution of the air takes place. From October to April, the great falls of the barometer are from 29 degrees 5 minutes to 28 degrees 5 minutes, and sometimes lower; whereas, during the summer constitution of the air, the quicksilver seldom falls lower than 29 degrees 5 minutes. It therefore follows that the fall of one-tenth of an inch, during the summer, is as sure an indication of rain as a fall of between two and three-tenths is in the winter.

Oil of vitriol is found to grow lighter or heavier in proportion to the less or greater quantity of moisture it imbibes from the air. The attraction is so great that it has been known to change its weight from three drachms to nine.

If a line be made of good well-dried whipcord, and a plummet be fixed to the end of it, and the whole be hung against a wainscot, and a line be drawn under it, exactly where the plummet reaches, in very moderate weather it will be found to rise above such line, and to sink below it, when the weather is likely to become fair.

A farmer who will accustom himself to observe the rising and setting sun, throughout the year, may be able to make a very accurate estimate of the weather. If the sun set clear, and no clouds intervene, when disappearing below the horizon, the succeeding day will generally be fine; and, on the contrary, if the sun sets cloudy, or is intercepted from the view by clouds at the moment of disappearing below the horizon, rain will generally fall within the succeeding twenty-four hours. Winds and storms will be indicated by the appearance of the atmosphere before they occur. In fact, Providence has afforded many signs whereby the attentive and industrious farmer may be in a great degree guarded against any sudden changes in the weather, which would be injurious to him; and in observing constantly the rising and setting sun, he is amply repaid for his attention by the opportunity it gives him of seeing the most glorious picture Nature offers to our view. If some seasons are less propitious to us than others, from long continued drouth or moisture, we should rejoice and be thankful that they are not of frequent recurrence, and are generally occasioned by natural causes, which are partly explained in the foregoing pages.

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APPLE-GRAFTS IN OHIO.—ISRAEL PUTNAM, Esq. according to Mr. Bateman (excellent authority), Editor of the Ohio Cultivator, is entitled to the honor—and such we consider it—of having obtained the first grafts of *apples* introduced in Ohio. They were brought from the orchard of his grandfather, Gen. Israel Putnam (of wolf-killing memory), and were “put into the hands of William Rufus Putnam, for him to distribute, and graft a nursery of seedling stocks for himself and brother. This pioneer nurseryman is still living, in the enjoyment of sound health, and has in his possession the original list of these grafts.”

## PLANTING IN SOUTH CAROLINA, AND IN MISSISSIPPI AND LOUISIANA.

### EXPENSE AND RESULTS COMPARED.

*Sir*: In your periodical for July, 1846, there is a communication signed S. B. on the subject of the "Cost and Profit of Cultivating Corn and Cotton" in South Carolina and Georgia.

Presuming something on the same subject from Mississippi and Louisiana would not be unacceptable to your readers, I offer you the following:

On the uplands in Mississippi and Louisiana, the average product of corn per acre is not less than 25 bushels. It ranges generally between 25 and 30 bushels.

On the lowlands the average product is 35 bushels per acre, and generally ranges between 35 and 45 bushels.

On the uplands the average product of cotton per hand is 6 bales of 400 lbs.; or 2,400 lbs.

On the lowlands the average product is 8 bales, or 3,200 lbs. per hand.

The average cost of production is rated at 2 cts. per lb.; leaving 4 cts. per lb. (assuming the value to be 6 cts.) for interest on capital, insurance on property, &c. &c.

On all well-managed plantations there is no difficulty in raising corn and fodder enough for the supply of the place, without any interference with the culture of the cotton crop. On the lowlands it is an easy matter to raise more corn than the place can consume, and as much cotton as the hands can pick, from August till January.

Contrast the product in South Carolina and Georgia with that of the *low* lands of Louisiana and Mississippi:

#### SOUTH CAROLINA AND GEORGIA.

12 bushels of corn per acre.  
150 lbs. of clean cotton do.  
Average product per hand, 1,200 lbs.  
Worth, at 6 cts. \$72.

#### LOUISIANA AND MISSISSIPPI.

35 bushels of corn per acre.  
450 lbs. of clean cotton do.  
Average product per hand, 3,200 lbs.  
Worth, at 6 cts. \$192.

It is not universally conceded, among our most intelligent cotton planters, that the cost of production is increased by the policy of the Government. On the contrary, many, *very* many, of our most intelligent planters—and of those, too, most devoted and minute in their attention to their interests—believe the policy of the Government, in fostering home industry, has diminished the cost of production, and enhanced the value of the product.

The mere expense of feeding and clothing in Louisiana and Mississippi amounts to but little, and forms a small item in the plantation accounts. For example: Take a force of 50 hands (and, to give this force, the aggregate number will be 75 or 80), and what will be the cost of clothing and feeding?

Say for 750 yds. of cotton cloth, for the effective force, at 10 cts. per yd. ....	\$75
.. 250 .. jeans, at 38 cts. per yd. ....	95
.. 150 .. linseys, at 28 cts. per yd. ....	42
.. 50 .. .. for the children, at 28 cts. per yd. ....	12
.. 150 .. cotton cloth, for do. at 10 cts. per yd. ....	15
.. 65 brls. of pork, at \$10 per brl. ....	650
.. Hats, shoes, and head hdkfs. ....	125

Thus, the total cost of feeding and clothing a plantation (the effective force on which is 50 hands) would be .....\$1014  
Deduct the amount for pork—which is not affected (at least, not *enhanced in price*) by the policy of the Government. .... 650

And we have for clothing .....\$364

Now, admitting that the cost of this item is enhanced 30 per cent. by the protective duties, and it only adds \$109 20 to the plantation expenses. So that a  
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plantation producing, in Louisiana, 400 bales of cotton, worth, at 6 cents per lb. \$9,600, is taxed, for the benefit of the manufacturing interest, \$109 20 annually.

But, small as this item is, it cannot but be felt by those whose product is but 12 bushels of corn to the acre, and 1,200 weight of cotton to the hand; because the expenses of producing in South Carolina and Georgia 3 bales of cotton to the hand amount to as much per head as those of the Louisiana planter, who makes 35 bushels of corn to the acre and 8 bales of cotton to the hand.

The truth is, the Carolina and Georgia planters, who make but 12 bushels of corn to the acre, must cultivate more land in corn in order to produce their supplies than the Louisiana planters, and consequently must cultivate less in cotton; and this may be one and a principal reason why cotton planting has ceased to be so profitable in those States as it once was. The average product per acre on the lowlands in Louisiana being 450 lbs. while in Carolina and Georgia it is but 150 lbs. it follows, that to produce 8 bales to the hand, he must cultivate 7 acres to the hand, while to produce 1,200 lbs. or 3 bales to the hand, he must, in Carolina and Georgia, cultivate 8 acres to the hand. But, for the greater distance given to the cotton in the rich lands of Louisiana, it is easier to cultivate 10 acres to the hand than it would be to cultivate 7 on the poor lands of Carolina and Georgia.

Besides, on the lowlands of Louisiana it is so easy to raise a full supply of corn that most of our planters are enabled to raise more than half their supply of meat, and thus diminish the plantation expenses very considerably. It is pretty evident that the diminished profits of cotton planting in Carolina and Georgia are not so much the result of the policy of the Government as of the increased facilities of production in the more fertile valley of the Mississippi.

It is altogether probable that the recent change in the policy of the Government in the protective duty on sugar, may tend still farther to diminish the profits of the cotton planter in Louisiana and Mississippi, as well as in Carolina and Georgia. It is very certain that the diversion of capital and labor from cotton to sugar planting, which has been in such rapid progression for the last two or three years, will now be arrested, and, not improbably, that on many cotton plantations where preparations were making for the culture of sugar, the process of change may be altogether abandoned. Whatever tends to increase the culture of a product already superabundant, must tend to lessen the profits of that product. None will deny that, but for the disastrous season of last year, the cotton crop would have reached 2,500,000 bales. Would not such a crop, other things in Europe being the same, have reduced the price fully one cent a pound?

But if the cotton planters of all sections would devote more of their time, labor and attention to the improving of the quality of their cotton and to the raising, *within themselves*, of all they *consume, use or wear* on their plantations, and leave to politicians the regulation of the policy of the Government, they would do more and better for their own direct interests.

X. Y. Z.

*Rapide, La. July 20, 1846.*

☞ If agriculturists could break or "slip" the *blind bridles of party*, with which demagogues ride them for their own aggrandizement, and, instead of "leaving to politicians" the regulation of the policy of the Government, would have their sons so instructed that they might be qualified to *think*, and to understand and regulate the policy of the Government for *themselves*, with reference to the landed interest, which is the basis of all other interests, it would afford some ground to hope for the prosperity and perpetuity of the Republic. If farmers would vote for good, well-instructed, well-informed *landholders*, or invariably for *persons who have something to lose* by vicious or ill-directed legislation, we should not have witnessed the willingness or the ignorance with which the landholders of this country have allowed themselves to be fleeced, for the last thirty years, of about *three hundred millions*, for the maintenance of the military, or man-killing, machinery of this Government!—money enough to have overspread the land with a flood of *useful knowledge*, and to have carried a canal or a railroad to almost every man's door, and to have bound together all parts of the Union as with a chain of adamant. Instead, then, of having all our young men, sons of broken-down families, suppliants for clerkships, we should see them seeking contentment



and honorable distinction as intellectual cultivators, on a scale however small—satisfied with homely and wholesome fare—despising the honors to be won by the arts of the demagogue, and looking, for happiness and character, to intellectual enjoyment and a life of virtue and usefulness.

[Ed. Farm. Lib

## INDUSTRIAL RESOURCES OF THE WEST.

### HEMP CULTURE.

To the suggestion of Mr. Johnson, (son of our old and lamented friend, the late Hon. F. JOHNSON, of Kentucky,) of the distinguished firm of JOHNSON & FELLOWS, commission-house in New-Orleans, we wish to make acknowledgments for putting us in communication with the writer of the following—than whom no man in the Union is better informed on the hemp industry of the country.

This is another of resources for the benefit of our readers, developed by a very short, but most agreeable sojourn in the South last spring.

JOHN S. SKINNER, Esq.

LOUISVILLE, August 1, 1846.

Sir: I have received your letter of the 24th ultimo. I will now, with much pleasure, reply to a portion of its contents, and will hereafter communicate to you such facts, in relation to the hemp industry of our country, as I may deem of sufficient interest for record in the pages of *THE FARMERS' LIBRARY*.

I can now assert, without the shadow of a doubt, that the hemp trade has been brought to perfection. This has been done by the beautiful combination, in one machine, of the brake, the scutcher, and the heckle; for which combination we are indebted to the joint ingenuity of Dr. Leavitt and Messrs. Crocker and Hawes of this city.

I have been a daily inspector of the operations of the machine for the past week, and though I have been engaged for the last four years in the construction of a great variety of hemp machines, yet I am compelled to acknowledge that this is the only one that approaches even toward a complete machine. We find no difficulty in breaking, cleaning, and heckling *unrotted* or rotted hemp on the same machine. The operation is performed with great expedition, and without converting an undue proportion of the fibre into tow; indeed, I am convinced that there will be much less tow made by the machine than is usually made by the hand-brake. This machine is equally well adapted to flax, rotted or unrotted, as to hemp.

Knowing now that the machine has been brought into existence for the rapid breaking and cleaning of unrotted hemp, let us for a moment enter into some speculations in relation to that description of hemp, and its adaptation to naval purposes. An experiment was made many years ago in rigging the ship *North Carolina* with hemp in its unrotted condition. On her return, after an absence of three years, her rigging was examined, and found to be in a state of decay—produced, as was stated, by a fermentation of the hemp. This examination was considered as conclusive, and no consideration was ever after given to unrotted hemp, so far as the Navy Department was concerned.

I am aware that such would be the fate of all hemp, so manufactured, of an unprepared article. Its decay was caused by fermentation, and fermentation is now looked on as the beginning of decay; hence all American water-rotted hemp has commenced its decay before it has been spun into cordage—it being impossible to prepare it for the hand-trade without carrying it through the process of fermentation.

My object has been (and I am sure that it has been attained) to decompose the fermenting agent while the hemp is in its unmanufactured form; and, doing so, surely fermentation cannot ensue.

There is but one element in vegetable matter that can produce fermentation, and that is nitrogen; that can be evolved by the application of a high tempera-

ture, by water, by acid, or by an alkali—as either will answer. I choose that of heat, as most convenient; and, by its application to hemp, can cure it or season it, and give it as great a durability as heat or water,\* applied to any other woody fibre, gives it durability.

You would not expect to find a good ferment in your yeast after having subjected it to a baking or boiling process, because the fermenting principle has been destroyed by the agency of heat. Such will, invariably, be the result; and so it must be with hemp, it being governed by the same laws that govern every variety of woody fibre.

You may infer from the above remarks that I do not consider Billings's machine or Billings's process, for the preparation of hemp, as likely to be generally adopted.

Yours, very respectfully,

JAMES ANDERSON.

### AGRICULTURAL COLLEGE NEAR PHILADELPHIA.

"WE learn by a notice in the Germantown (Pa.) Telegraph, that James Gowen has recently purchased the old college buildings and grounds adjoining his beautiful farm and residence at Mt. Airy, with the design of establishing an Agricultural Institute, if sufficient encouragement is offered. From what we know of Mr. Gowen's intelligence, energy and skill, and his thorough practical knowledge of farming, together with the admirable adaptedness of his grounds and buildings for the purpose, we do not hesitate to avow our opinion that he is just the person, and Mt. Airy just the place, for establishing an institution of this kind. Let the public press, and especially the friends of agricultural improvement, lend their aid and testimony in behalf of this and all similar undertakings, when wisely commenced, and there can be no doubt of their success.

"We see Mr. COLMAN's name mentioned in the Telegraph as a suitable candidate for the Presidency of the institution; but we do not think he would be willing to assume that responsibility, nor should we deem it expedient to select, for that office, a person of his advanced age."

THE above, from the Ohio Cultivator, is the first notice which we have seen (17th of August) of the matter to which it refers. We agree as to the location and the public spirit of Mr. G. and his high appreciation of the great benefit to be derived to the whole country by measures which shall result in *enlightening, as the best means of improving the practice of Agriculture*. As to Mr. COLMAN's willingness to "assume the responsibility" of the Presidency, we do not know; but we do not agree with our respected colleague of the Cultivator, that it would be inexpedient on account of the reason named, or any other of which we are aware. On the contrary, we should judge Mr. C. to be eminently fitted for such a trust, with suitable assistants in the various departments, and himself placed in a position perfectly independent and above the control of inferior minds. In one thing friend Bate-man will agree with us—that if he were to undertake it, judging by all we have seen from his pen, he would enter upon the duties with an elevated view of their importance, *aiming to do good, and leaving fame to follow*, uninfluenced by gross mercenary motives, and scorning that sort of popularity which is caught by setting traps to amuse or to bamboozle the public.

The number of agricultural institutions which are being established in various parts of the country, afford a most gratifying proof that the *sentiment has taken root*, that Agriculture has its science and literature and is a fit subject for the *occupation of the mind*. It is by planting and disseminating that sentiment that American Agriculture is now to be permanently and essentially benefited and elevated—more than by offering a few dollars for *fat hogs, or large crops on small lots*. We should like to receive and publish a complete list of all the agricultural schools, their terms, course of instruction, &c. &c.

An Agricultural School has, as we have casually seen, been opened on the farm of Gen. HARMON, in the western part of New-York; one by Mr. JOHN WILKINSON in Dutchess County, New-York, and a "Scientific and Practical Agricultural Institute" near Walden, in Orange County of the same State. These may be considered among the first fruits of

\* We season at our Navy-Yards, by heat and by water, every variety of timber.

In Russia the hemp is kiln-dried immediately after pulling. It is immersed in water during the winter months. Is it possible, then, that Russia hemp can undergo the process of fermentation?

greater attention to, and better systems of education in New-York ; but what are their terms and regulations—the number and qualification of the Professors, and the plans of instruction, we are not informed. Such institutes should be gotten up with great care, under the best lights, and be conducted by men of adequate acquirements, and of elevated ideas of the importance and usefulness of their office ; and we have no reason to doubt that this has been done in the cases referred to.

Our General Government, by the vote of the *Representatives of the landed interest*, appropriates annually more than \$100,000 to the object of *military instruction* ! Suppose in their wisdom these Representatives had supported also, at the same expense, for the last thirty years, an Institution for the *Instruction of Teachers of Surveying, Mineralogy, Botany, Comparative Anatomy Agricultural Chemistry, Carpentry, and Engineering as connected with the Structure of Roads, Canals, Bridges, &c., Mechanical Philosophy*, and all the arts and sciences, necessary to a better understanding of the *principles of Agriculture and Horticulture and the manufacturing arts* ! What a mass of useful knowledge might by this time have been diffused *through every State in this Union* ! Knowledge which could not be put in use without increasing the comforts of and happiness of Society ! Ay, and this will come to pass, in time, when, by the proper education of the rising generation, farmers are brought to think for themselves to feel their power and to *know how to use it*.

#### FAIR OF THE AMERICAN INSTITUTE.

For the Nineteenth Fair of the American Institute, including an exhibition of pure-blooded and other cattle, a plowing match, and spading match, and horticultural show, the Managers announce the completion of extensive arrangements on the spacious premises, corner of Twenty-third street and Fifth-avenue.

Feed of every description will be provided on the ground at the cheapest possible rate for those who wish to purchase ; and as no entrance money for cattle will be required, and exhibitors may bring their own feed, the expenses on the occasion will be greatly reduced.

Animals offered for premiums will be under the special direction of a member of the agricultural board.

All entries of stock must be made in writing, and delivered to the clerk at the time of entry at the committee room, on Monday, the 12th day of October, with full pedigrees of the animals, their breed, ages, owners' names, &c. ; and with such observations as to their food, thrift, constitution, milking or fattening qualities, as they may see proper to add. If previously sent to T. B. Wakeman, Corresponding Secretary of the Institute, they will be attended to. This is absolutely necessary, that the Secretary may be able to prepare lists in time for the use of the Examining Committee ; and neither the Secretary nor the Committee will be responsible for the omission of any animal on the lists, if this rule is not complied with. Labels stating the breed of the animal, age, owner's name, number of entry, &c. will be appended to each animal, as soon as located.

The rule in force at former Fairs, of excluding animals which have already taken prizes of the American Institute, is abolished, and the premiums are now open for competition without reservation.

In a work like this, which is patronized over the whole country, and, in proportion to population, with remarkable equality as to the number of its friends, it cannot be expected that we should fill several pages with the details of these arrangements ; nor is it necessary, since they will be so widely diffused through other channels. Suffice it to say that these arrangements are the result of many



years of experience, and a careful study to conciliate the public approbation and to promote the convenience of all who may assist in consummating the patriotic designs of the Institute.

We have room only to express our humble gratification at seeing that a very small proportion, if any, of the funds set apart for premiums, is to be given in *money*. The Trustees or Managers have paid to the agricultural community the compliment to act on the presumption that those who strive at excellence in any of the departments of this most important branch of human industry are actuated by motives far above the sordid hope of *winning a few shinplasters!* Hence they have offered to a nobler ambition the chance of winning an enduring family trophy, or memorial, in the shape of a medal, or piece of plate, or in agricultural works—treasure of as far more intrinsic value than money, as mind, and character, and capacity to be useful, are to be preferred to mere physical strength and the means of sensual gratification.

After all, associations for agricultural improvement will everywhere illustrate their public spirit and usefulness, in exact proportion as their measures tend to inspire among farmers an attachment to and a pride in their pursuit—in proportion as they endow them with a just appreciation of its intellectual requirements, and with a consciousness how much its practical success, as well as the honor of those who follow it, depend on various intelligence as well as on untiring industry and expenditure, liberal but discreet, according to their means.

When public sentiment shall have been rectified, as it will be, gradually, by more salutary systems of education, holders and tillers of the soil will get to have a better knowledge of what is due to themselves, and will take care that all exactions levied on their substance, and deducted from the fruits of their industry, shall be appropriated, *at least in some proportion, and directly*, to their own benefit.

### CATERPILLAR AMONG THE SEA-ISLAND COTTON.

SUGGESTION OF AN ANNUAL MEETING OF AGRICULTURISTS AT SARATOGA, AND AT THE WHITE SULPHUR SPRINGS IN VIRGINIA.

SOUTH CAROLINA, August 3, 1846.

*Dear Sir:* A slight improvement in health will enable me, I trust, to pass the summer at home. This it is essential to my interests that I should do, as the appearance of the caterpillar renders the destruction of the long cotton crop nearly certain. The enemy has shown himself earlier by three weeks than was ever known, and our cotton fields, from the coldness of the spring, are unusually backward. The time that elapses between the exit of one brood and the presence of another is from 20 to 24 days. Great injury is done by the second generation, but the third "leaves not a wreck behind." About the 1st of September, therefore, we may fairly calculate to look on blighted hopes, with the expectation of ruin, perhaps, to many.

About ten days ago I sent to our Secretary, who resides in Columbia, a number of questions, and begged him to add to them, if he thought proper. As they will be printed, you shall have a copy. I directed him to forward a copy to every U. S. Senator, accompanied by the request that he would cause it to be delivered to the President of the S. A. S. of his State. The one for the New-York Society will be directed to your care.

As there is a large gathering of strangers at the White Sulphur and Saratoga Springs every summer, would it not be advisable to have an annual agricultural meeting at those celebrated watering places? In the attainment of this end, let the State Agricultural Societies of Virginia and New-York, each of course acting independently of the other, arrange some scheme by which the several States represented at the Springs might have an opportunity of showing their disposition

to further the great cause of agricultural improvement. Let printed questions be prepared and circulated through the Union, in order that such of the visitors who feel an interest in the matter might be prepared to reply to them. I give you the hint. Bring it to the notice of the readers of your journal, if you consider it worthy of consideration.

J. S. SKINNER, Esq.

W. B. S.

We publish the suggestion with pleasure, and the hint would be taken and carried out if agriculturists were imbued with the same enlightened and ardent devotion to their concerns that animates other classes; but, of all others, they are the most listless—as, for instance: At the late meeting of the Farmers' Convention at New-York, a "Central Committee" was appointed "to collect information, &c." Well, the Chairman called most respectfully on the good offices of the Presidents and Secretaries of Agricultural Societies, only so far as that they would take the trouble to write down the name of the Society and its President, and transmit the letter, postage unpaid, to J. S. SKINNER, Chairman as aforesaid; and out of the many hundred Agricultural Societies in the Union, how many, does the reader suppose, have taken the enormous trouble to write the five lines required in the case? *Not more than five or six!* Men must be brought up to read in connection with their calling in life, and to understand that it has its principles to be studied, and its rights to be defended against hostile legislation, before they can be brought to compare notes and devise the means of anticipating or counteracting it, or to diffuse among all the most recent and valuable discoveries in the processes of their art.

### PRICES CURRENT.

[Corrected, August 22, for the Monthly Journal of Agriculture.]

ASHES—Pots, 1st sort.....	100 lb. 3 56½ @ —	Staves, White Oak, pipe, P M....	50 — @ —
Pearls, 1st sort, '46.....	4 12½ @ —	Staves, White Oak, hhd.....	40 — @ —
BEE SWAX—American Yellow .....	26½ @ — 27	Staves, White Oak, bbl.....	30 — @ —
CANDLES—Mould, Tallow..	9 @ — 11	Staves, Red Oak, hhd.....	24 — @ 26 —
Sperm, Eastern and City.....	26 @ — 38	Hoops.....	25 — @ 30 —
COTTON—From.....	7½ @ — 10½	Scantling, Pine, Eastern.....	— @ 15 —
COTTON BAGGING—American.....	13 @ —	Scantling, Oak.....	30 — @ 35 —
CORDAGE—American.....	11 @ — 13	Timber, Oak.....	22 @ — 33
DOMESTIC GOODS—Shirtings, P y.....	5 @ — 11	Timber, White Pine.....	15 @ — 22
Sheetings.....	6½ @ — 15	Timber, Georgia Yellow Pine .....	20 @ — 22
FEATHERS—American, live.....	24 @ — 30	Shingles, 18 in.....	1 75 @ 2 —
FLAX—American.....	8 @ — 8½	Shingles, Cedar, 3 feet, 1st quality.....	25 — @ —
FLOUR & MEAL—Genesee, P bbl.....	4 — @ 4 06½	Shingles, Cedar, 3 feet, 2d quality.....	22 — @ 23 —
Troy.....	4 — @ —	Shingles, Cedar, 2 feet, 1st quality.....	17 — @ 18 —
Michigan.....	3 97 @ 4 —	Shingles, Cedar, 2 feet, 2d quality.....	15 — @ 16 —
Ohio, flat hoop.....	4 — @ —	Shingles, Cypress, 2 feet.....	13 — @ 14 —
Ohio, Heywood & Venice.....	4 37½ @ 4 50	Shingles, Company.....	— @ 28 —
Ohio, via New-Orleans.....	3 50 @ 3 62½	MUSTARD—American.....	16 @ — 31
Pennsylvania.....	— @ —	NAILS—Wrought, 6d to 20d... P lb.....	10 @ — 12½
Brandywine.....	4 25 @ 4 50	Cut 4d to 40d.....	4 — @ 4½
Georgetown.....	4 18½ @ 4 25	PLASTER PARIS—P ton.....	2 37½ @ 2 50
Baltimore City Mills.....	4 — @ —	PROVISIONS—Beef, Mess, P bbl.....	6 25 @ 7 —
Richmond City Mills.....	5 50 @ —	Beef, Prime.....	4 25 @ 5 —
Richmond Country.....	4 12½ @ 4 25	Pork, Mess, Ohio.....	9 75 @ —
Alexandria, Petersburg, &c.....	4 — @ 4 12½	Pork, Prime, Ohio.....	8 — @ 8 12½
Rye Flour.....	2 75 @ —	Lard, Ohio.....	5½ @ — 7
Corn Meal, Jersey and Brand.....	2 56½ @ 3 —	Hams, Pickled.....	4½ @ — 4½
Corn Meal, Brandywine..... hhd.	14 75 @ 15 —	Shoulders, Pickled.....	3½ @ — 3½
GRAIN—Wheat, White..... P bush.....	90 @ — 95	Sides, Pickled.....	— @ —
Wheat, Red..... new.....	80 @ — 86	Beef, Smoked.....	5 @ — 5½
Rye, Northern.....	72 @ — 75	Butter, Orange County.....	15 @ — 16
Corn, Jersey and North..... (meas.)	59 @ — 60	Butter, Western Dairy, new.....	12½ @ — 14
Corn, Southern..... (measure)	53 @ — 54	Butter, grease.....	6½ @ — 7
Corn, Southern..... (weight)	— @ —	Cheese, in casks and boxes.....	6 @ — 6½
Oats, Northern.....	29 @ — 30	SEEDS—Clover.....	6 @ — 7½
Oats, Southern.....	23 @ — 25	Timothy.....	11 — @ 15 —
HAY—North River in bales, P 100 lb.....	45 @ —	Flax, Rough.....	8 50 @ —
HEMP—American, dew-rotted... ton	70 — @ 90 —	SOAP—N. York, Brown.....	4 @ — 6
" " water-rotted.....	130 — @ 185 —	TALLOW—American Rendered .....	7 @ — 7½
HOPS—1st sort, 1845.....	12 @ — 16	TOBACCO—Virginia.....	2½ @ — 6
IRON—American Pig, No. 1.....	32 50 @ 35 —	North Carolina.....	2½ @ — 5
" " Common.....	22 50 @ 25 —	Kentucky and Missouri.....	2½ @ — 7
LIME—Thomaston.....	70 @ — 75	WOOL—Am. Saxony, Fleeced, P lb.....	32 @ — 34
LUMBER—Boards, N.R., P M. ft. clr.	30 — @ 35 —	American Full Blood Merino .....	27 @ — 28
Boards, Eastern Pine.....	11 — @ 13 —	American ½ and ¾ Merino.....	22 @ — 25
Boards, Albany Pine.....	10 @ — 18	American Native and ¾ Merino.....	20 @ — 21
Plank, Georgia Pine.....	27 — @ 30 —	Superfine, Pulled.....	22 @ — 26





